A Clinical Lecture
ON
ECZEMA IN RELATION TO AGE.

Delivered at the Medical Graduates' College and Polyclinic on Jan. 9th, 1901,

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GENTLEMEN,—Heinrich Heine the poet, when he was on his "mattress grave" suffering from a terrible form of paralysis, used to spend a part of his time in reading medical books about his disease, and, according to Matthew Arnold, one of his friends asked him one day what advantage he supposed this reading would be to him. His answer was that he was preparing to give a lecture in heaven as to the want of knowledge of the doctors on this earth concerning the diseases of the spinal marrow. I think that if Heine were alive to-day and suffered, as he might suffer, from a terrible attack of eczema, with all its tortures and its frightful irritation, he might study the works which are published at the present time and might have given the same answer. The painful truth is that what he said about spinal diseases might equally be said about this particular disease. The various books and papers which are published upon eczema differ enormously in almost all particulars concerning the disease. There are hardly two of them that agree even on a definition. Is it, therefore, to be wondered at that the disease is an exceedingly difficult one to understand? In the whole range of dermatology, as far as my experience goes, there is no subject which at present more eludes our mental grasp than the pathology and treatment of eczema. This statement will doubtless sound discouraging, but we must look the truth in the face, otherwise no progress is possible. Those who have devoted their lives to the work, who have been studying eczema for years, still find the same difficulties that others have found before them. There are difficult points that arise and meet us at every phase of the disease, from the beginning to the end. In my remarks to-day I propose to take certain of the commonest forms, those common types which every practitioner meets in his daily work. I do not propose to go into the various theories of eczema or to discuss problems in connexion with them; these are better discussed at congresses, international or otherwise. I would ask you to imagine that we are actually at the bedside of a patient and that we are confronted with problems which we have got to try to solve; the various difficulties that meet us we will discuss in detail according to the different forms. The first thing which has to be recognised is that this disease presents certain well-marked differences corresponding to different ages in life. I shall divide the subject in this way: (1) the eczema of the infant; (2) the eczema of the young child; (3) eczema at the age of puberty; (4) eczema in the adult; (5) eczema in the adult woman at the change of life; and (6) eczema in the aged.

ECZEMA IN INFANCY.

First, with regard to eczema in the infant. We will suppose that the practitioner has attended a woman in her confinement, and that after the child is born the nurse calls his attention to the fact that there is a little circular patch on the scalp. The patch is generally of about the size of half-a-crown, or a little bigger, of a dirty-brown colour, and composed of greasy material which is very adherent to the scalp. The nurse asks what is to be done. The usual answer, or at any rate a very common answer, is that it is of no consequence—that it is nothing, and that it will disappear in the course of time. This little patch is a patch of seborrhœa; sebaceous matter has been secreted and has dried. This little patch is of the greatest possible importance, and it will therefore be well if the practitioner pays considerable attention to it. It is very often the focus from which an eczema of the scalp in an infant will start. The first thing that happens if it is left alone is that around the brownish patch in the centre of the scalp a red areola appears, and from that red areola other circular patches will appear on other parts of the scalp. Now if care is taken to treat this in the very earliest stage I believe that a considerable amount of eczema in the young child will easily disappear. The question is how it should be treated. We have first of all to recognise the fact that in the child there is a great blood-supply to the brain. It is necessary that this should be so, as abundant nutritive material is required for the formation of bone and the building of the brain. Owing to the great vascularity of the scalp the slightest irritant is very likely to convert what is in the first instance a trivial condition into a very acute one and to make the eczema spread from that particular spot. As a rule nurses are very fond of scrubbing the infant very freely with soap-and-water. I think that is much overdone, and I think a word of warning should be uttered by the practitioner, especially if the child has the slightest sign of irritation of the scalp. Washing should not be done with any violence. If a soap be used it should be a superfatted one; it should not be the ordinary yellow soap. The scaly material should be treated with the greatest possible gentleness and should only be removed by degrees.

Next, should the child's head be kept covered? I think infants' heads are kept far too much covered; and if there is the slightest tendency to any inflammatory condition of the scalp it is better that the child should not wear any form of cap, especially in the house, and when taken out should not be too warmly clad about the head. Friction tends to increase the blood-supply and to cause irritation. If the patch of eczema does not disappear it will go on to a more acute condition and will spread in the form of circular patches, not only on the scalp but also on the face. Thence it will come down the front of the chest, and it may pass down behind the ears and so down the neck, and in that way there may be a complete collar formed round the neck. Then patches may appear upon the abdomen and the back and subsequently on the limbs. These patches may be red, slightly raised and scaly, and to a slight extent irritable. But after a time the disease will suddenly assume an acute character and will pass from the first dry red stage into an exudative stage and there will be discharge. In parts there may be actual vesication or pustulation. It is in a young child that eczema tends more especially to become pustular. In a certain number of days—or it may be hours—the discharge will dry and form crusts, and then the typical condition of eczema of the infant will be met with, with thick crusts all over the scalp and face and scattered about the body. In the later stages there is a considerable amount of irritation. In the case of the adult it is often explained that the eczema spreads by means of scratching, but this cannot be so in a small infant which has hardly strength enough to scratch; therefore there must be some other explanation why these patches spread. Many mothers are often in the habit of tying infants' hands or of enveloping them in bags so as to prevent their scratching themselves. I think it is a wrong and cruel thing to do. If I had an eczema I should not like to have my hands tied or enclosed in bags, and I do not see why the defenceless infant or young child should be so treated. It must be our endeavour so to modify the process that we can give the child relief without putting it to that extra torture.

As regards the treatment of this form of eczema in the first stage, when it is only in circular scaly patches, it is to my mind purely a local condition and requires no constitutional treatment at all. The local treatment should be of the very simplest and gentlest character; strong ointments or lotions are not appropriate. The applications should be of an antiseptic character. There is no better one, especially in the first instance, than an extremely weak sulphur ointment—five grains of precipitated sulphur to one ounce of benzoated lard. When the discharge stage begins it is necessary to consider what particular factor it is that has converted the simple patchy, dry form into an acute condition. That is one of the greatest problems connected with the subject. Every practitioner has his own views on this particular point. The probable answer to the question is that it is a complex factor or several factors which produce the change from the simple seborrhœic condition to the acute eczema in the infant. One of the first causes always alleged is that the child is improperly fed, but I have seen eczemas commence and become extremely severe, and go through their other phases and relapse though the child has been fed in every way properly, when it has been taking

its mother's milk and the mother is in good health. Therefore, that particular factor at that time need not necessarily be the cause of this sudden change. It is possible that there is something inherent in the skin itself which causes the change, but what that is is an unknown *x*, something which is added to the original condition which converts it from a quiet stage into an acute discharging one. But a little later, as the child gets older, there are factors which unquestionably have an influence. The first of these is vaccination. We are constantly asked what is the relation between vaccination and the eczema of infants. Now, the usual rule with vaccination officers is that they are not to vaccinate a child who has eczema. What is the reason of that rule which, I believe, is one of the regulations of the Local Government Board? The chief reason is that the vaccination will not take if there is a discharging surface. So that in the acute condition vaccination is not appropriate simply because the vaccination will not take. In some rare instances the acute stage is shortened and moderated by it and the eczema dries up and disappears, apparently under the direct influence of the vaccination. On the other hand, if vaccination is done when there are only circular scaly patches of the seborrhœic type and nothing acute the vaccination as it comes to its height with the fever which is produced will rouse these patches into a state of violent inflammation. This rarely occurs, but it does occur and it ought to be recognised at its true value. Not only will vaccination do it, but other zymotic diseases will. It is not at all an uncommon thing for a child with scaly, dry patches to have them suddenly aroused into activity by an attack of measles. I have seen many such cases. There are other factors which are also irritating and which do harm in a reflex way. One of the commonest of these is intestinal worms. Young children with worms will have their eczema aroused into a state of the greatest possible activity, and it is necessary, therefore, that we should direct our attention to that. If, therefore, we have got a child who is being well fed, who is having food which is appropriate, and in whom the simple, dry, scaly condition has been converted into an acute eczema, what internal treatment can we give which is likely to modify the process and to relieve the symptoms? I believe there is no drug or combination of drugs which has such a good effect internally as mercury in some form. I believe it to be the experience of every general practitioner that if children are out of sorts a small dose of mercury will do wonders for them. Certainly that is the case as far as acute eczema is concerned. Of all the preparations of mercury there is none better than a small dose of calomel. It should be given at bedtime and repeated in two or three nights. So far as the constitutional treatment is concerned it is the best that I know for this condition.

Then as regards local treatment of the acute stage, it is first necessary to do everything in our power to dry up the discharge, and the best way to do that is to apply powder. But if powder be applied to the skin a crust is formed which is sometimes exceedingly difficult to get off, and in the process of trying to get it off the condition is again aroused into activity. Therefore, it is not a bad plan to apply the powder in a muslin bag. Then comes the question what particular kind of powder should be employed—whether it should be simply starch or rice powder, or whether it should be some antiseptic powder. I think that the best way out of that difficulty is to mix them. One part of finely triturated boric acid and one part of starch, and perhaps one part of oxide of zinc, should be taken. These combined make an exceedingly useful drying powder. If it is put into a muslin bag, not too tight, and loosely applied over the head, that will tend to moderate the discharge. Immediately after that something extremely soothing should be applied to check as far as possible the formation of scabs. One of the prescriptions which I am fond of using at that particular stage is what I call "zinc cream." It consists of oxide of zinc, lanoline, olive oil, and lime-water. The proportions best suited for it, I think, are: seven drachms of oxide of zinc, one drachm of lanoline, one ounce of olive oil, and one ounce of lime-water. It will at once be seen that the olive oil and lime-water make carron oil, to which are added oxide of zinc and lanoline. If oxide of zinc be added to the carron oil without the lanoline a separation of the lime-water is obtained which interferes very much with its efficacy. As regards its preparation, the best plan is to mix the olive oil and the lanoline together in a bath, and when it is melted add the lime-water, and then while it is still warm stir in the oxide of zinc. If that is done in rather a large way, and the ingredients are therefore thoroughly mixed, the blandest possible cream will be the result. We know how in the case of burns the carron oil relieves the smarting and the pain, and as we want to do that in this condition it is a particularly useful application for it. To that cream can be added drugs of an antiseptic character, and there is none that I know of that irritates less or answers better in drying up this condition and converting an acute into a subacute stage than ichthyol. A very small quantity should be used. In infants I would begin with half a drachm of ichthyol to three ounces of the cream. Then with regard to the way of applying it. Linen should be torn into narrow strips and should be soaked in this cream and then applied very accurately. The whole of the affected skin surface should then be covered with a very thin gauze bandage to keep it in place. As soon as it begins to dry these strips should be removed and some more should be dipped into the cream and applied as before. As soon as the condition passes into the dried-up scaly stage an ointment is more suitable than the cream, because the cream is exceedingly drying in its effects. Then we come to the use of a simple ointment. I would here say that it is a very common thing to use simple boric acid ointment for it. That is about the most uncertain application I know of. Sometimes it is of use, but sometimes it irritates badly and does an immense amount of harm. On the whole it is too uncertain to trust to in young children. At the next stage, therefore, I suggest weak ammonio-chloride of mercury ointment.

This form of eczema, like all others, is cyclical in its nature. It starts in the way I have described; it comes to its height and then subsides again; but the whole tendency of the condition is to commence again; and in spite of all our treatment, however well directed it may be so far as internal or local treatment is concerned, there are a certain number of cases that go on relapsing again and again, and I do not know of any method of treatment by which these particular cases can be certainly cured. Fortunately the proportion of these stubborn cases is exceedingly small. We know that some adults who are the victims of constant attacks of eczema will tell you that they have had it since they were infants. The disease may become altered in character to some extent when they get older, but still it is clear that if they have been told that they had it when very young it has persisted more or less all through their lives. As I say, in spite of all the schemes which have been suggested, I know of nothing that will ensure non-recurrence. But if we are very careful in the matter of treatment we can reduce the number of those incurable cases to a very small percentage. Accuracy of treatment in early life I believe to be the key of a great deal of the success in future. Individuals may be saved from becoming eczematous subjects in later life if sufficient care with regard to the conditions in infancy and in childhood be observed.

In the more chronic forms of eczema in infancy, when it is not expedient to be constantly giving calomel, small doses of grey powder given as an alterative every night for a time seem to modify the process. I do not think that there is any use in giving very young children alkalies or in attempting to give them so-called specific treatment. Indeed, I know of no drug which can be called specific for the disease, therefore I think I should treat it on general principles as I have indicated rather than attempt a course of arsenic.

ECZEMA IN CHILDHOOD.

Now we will pass on to a little later in life—that is to say, to a child of four, five, or six years of age. Such a child may not have had eczema as an infant. At such an age the disease is also generally of the seborrhœic type. It usually begins with the formation of circular or oval patches of a rough and scaly character upon the cheeks or forehead. These patches are usually passed by as being of no consequence. But here, again, I would urge that they are of great importance and that they should be treated. They are easier to treat when they are quiescent than when they are acute, and a relapse is much less likely if the original scaly condition be treated at the beginning. At this age the question occurs whether a child who is liable to repeated attacks of eczema of this character should go away to school, or whether such child should go to the seaside for the benefit of the general health. First, with regard to going away to school, I think children who have a tendency to this disease are far better treated at home; they are

generally under the care of their mother, and are more likely to get well under these circumstances than if they were under the care of strangers. I have seen disastrous results from children with a distinct tendency to relapses of eczema going to school. With regard to the question of benefiting the general health by going to live at the seaside so as to get rid of this tendency, perhaps the patient has passed through the acute attack, but the parents have had experience of so many attacks in the past that they will ask the medical attendant if the child should be sent to the seaside. The answer depends entirely upon the character of the eczema. If the eczema of early life has left behind enlarged glands, which it may do from the local irritation, and if there is a distinct tuberculous history in the family it is in some instances a particularly wise thing to send the young child to the seaside. I have seen many children who have lost their glandular enlargement, who have got perfectly strong and well, and who have at the same time lost their tendency to relapses of eczema by residence by the sea. On the other hand, if the attacks are inclined to be extremely acute then certainly it is not wise to send the child to the sea, especially if there is no enlargement of glands and if there is nothing to suggest the possibility of a tuberculous history.

The next point which I want to deal with is the relation of eczema to teething. It has been the custom of the profession to be perfectly certain that teething is answerable for these attacks. It has never been perfectly clear in my mind that this is true. I have seen some of the worst cases before the teething period; I have seen some of these children who have been well during the teething period and have been very bad afterwards, so I am doubtful as to what relation teething has to it. But the feeling is very strong, and I think the bulk of the profession would say that there is a strong influence in teething.

ECZEMA AT PUBERTY.

There are two chief form of eczema which may commence at puberty. One is the seborrhœic form, which may commence upon the scalp and may also attack the face and other parts of the body, apparently by local infection, and the other is the form which is associated with dry skin—xeroderma. It is, as a rule, about that time of life that the first signs of eczema occur in connexion with xeroderma. In early life it is hardly noticeable; the skin is usually soft, but as the child gets older, and especially when it comes towards puberty, the skin becomes dry and harsh and a particular form of eczema is associated with it. It is not necessarily the result of exposure to cold or to cold winds, but it will come notwithstanding every possible care when the child is not exposed to bad weather. It usually attacks the flexor surfaces—the bends of the elbows and knees. This form of eczema requires rather a different kind of treatment from that which occurs in young children. It is essential that the dry condition of the skin should be treated, and this is to be done by emollient baths—that is to say, by soaking the skin in a prolonged bath, and then by softening the dry hard parts by means of glycerine and water in the proportion of five parts of water to one of glycerine. This should be well dabbed over the parts which are dry, and it will enable the parts which are inflamed to heal under very simple applications. If the eczematous patches are very acute the zinc cream already mentioned, with the addition of some antiseptic, will probably be enough to heal them, but no treatment will be effective unless attention is directed to the xerodermic condition of the skin as a whole.

There is another type which at this time of life very often appears for the first time, and that is the form of eczema which alternates with nerve-attacks, more especially with asthma and with the commencement of rheumatoid arthritis. When asthmatic attacks are severe it is not uncommon for the eczematous condition to disappear, and *vice versa* when the asthma is quieted the eczema is often bad. Again, it is not uncommon for pains in the joints to alternate with acute eczema. This group requires special internal treatment. Certain nerve-tonics, such as valerianate of zinc, small doses of quinine, and if the case is a very bad one perhaps even small doses of opium, should be given to quiet not only the asthma but also the recurrent attacks of eczema.

ECZEMA IN THE ADULT.

Now we pass to a consideration of eczema in the adult. First I would call your attention to a severe general attack of eczema in an otherwise perfectly healthy person. You may meet with an individual who has never had eczema before and he is in all respects perfectly well. He is suddenly exposed, we will say, to extreme cold. He may have ridden on the top of an omnibus and have become extremely chilled when returning home in the evening; he may perhaps have had a trifling rigor and next day he will show signs of eczema on various parts of the body. This eczema will sometimes come out suddenly so that in a few hours the whole of the body may be attacked by it. Especially does it attack the more sensitive and tender parts of the skin—the flexor surfaces of the arms, the backs of the legs, the chest, and the back. I have seen a person become covered all over with discharging eczema in 48 hours after exposure to severe cold. In such a case the patient should be put to bed and be covered over with the lightest possible clothes; his diet should be of a very non-stimulating character, without alcohol or coffee or tea; and the bowels should be opened by a dose of calomel, followed by a saline in the morning. As a remedy I know nothing which is of greater use than small doses of tartarated antimony. This is the particular form in which antimony is of the greatest possible service. It should be given in repeated doses at first; the second dose should follow an hour after the first, and the third dose three or four hours afterwards, and following that three times a day. A thirty-second of a grain is quite enough to produce a marked effect. Here I should like to relate briefly the actual facts of a case illustrating this type of the disease. The patient was a man about 43 years of age, in perfect health, who had never had an attack of gout in his life, who had never had rheumatism or any serious disease except the ordinary diseases of childhood, such as measles, and who had never had eczema. One day he went out for a drive in his carriage, apparently in perfect health. When he returned from that drive he told his wife that he felt ill and thought that he had caught cold. Next day he had an acute general eczema over the whole of his body. I saw him in consultation on the following afternoon, exactly 24 hours from the time he went for the drive and he was discharging practically from every part of his skin. Now, such an acute attack as that could hardly be explained, I think, by the action of microbes on the skin. I think that the only possible explanation is that it was a sudden nerve-storm, a neurosis which took this particular form. Instead of getting a sudden attack of bronchitis or of catarrh he suddenly got a catarrh of his skin. That night he was given four grains of calomel and a saline on the following morning. At 4 P.M. or 5 P.M. a dose of a thirty-second of a grain of tartarated antimony was given, and that was repeated again in three hours. The only local treatment he had was that he was put to bed and was powdered all over with oxide of zinc and boric acid. I saw him again on the following afternoon, when there was no discharge whatever; the parts were absolutely dry and he was covered all over with crusts and scabs as a result of the drying up of the discharge. He had had a very free action of the bowels as a result of the calomel and the saline in the morning, and in every way he expressed himself as being very much better. He went on with the antimony for four days afterwards. When I saw him again at the end of that time all signs had gone except that though there was practically nothing to be seen he was left with the most severe irritation of the whole of the skin. That is, perhaps, one of the most troublesome things which practitioners are called upon to treat—namely, the irritation left behind from a very severe acute attack. The intense dread of another attack coming on produces a state of great nervous excitement. Though there is nothing to be seen these patients will scratch and suffer terribly from the irritation, so much so that in some cases it produces a disturbance of the nervous system almost amounting to actual insanity. In the particular case which I have mentioned the man's irritation was fearful, and he said that it was then worse than on the day when the attack was at its height. That was treated for weeks with all kinds of local applications, but nothing whatever did him the slightest good. Applications of weak tar and many other remedies were applied, but he did not get any relief from his itching until he went to Schiznach in Switzerland, where he had a course of baths for three weeks. He returned free from irritation.

Perhaps this is the place to emphasize the importance of the mineral water treatment in certain forms of this disease.

It is not appropriate to send persons to a mineral water cure during the acute stage, nor is it appropriate to send them during the subacute stage which may follow; but it is appropriate to send them when they are left with only a neurosis as the result of it. I do not say that that is the only form of eczema which is benefited by mineral water treatment, but I think that it is one of the most important.

Eczema and alcohol.—In connexion with general attacks I think a word should be said about eczema and alcohol. I have recently had a case under my care which has brought this prominently before my mind. A man in active business had been in the habit of taking a very fair quantity of alcohol every day for a great number of years, though never in excess. He was suddenly laid up with an acute attack of eczema. He was treating himself for a length of time before he called in his medical attendant, and during that time he was continuing his alcohol. Afterwards the alcohol was stopped, and under simple treatment he got well. When he went back to his work he began to take his alcohol as before, and had a second attack of eczema. It was then suggested to him that he should leave off taking alcohol altogether. He did so and has not had a return since. I think the relation of alcohol to these attacks is a very important one.

Intertrigo.—The next form, which is very common, is the form known as intertrigo, the attacks of eczema which occur round the scrotum and on the inner side of the thighs and about the anus. It usually commences with a circular red patch at the upper and inner side of the thigh, and from the pressure of the scrotum against that patch a corresponding patch will come upon the scrotum. After a little time the patches will spread, and will extend backwards, and will very likely come upon the other side, until at last a red irritable patch will be formed more or less corresponding to the bathing drawers area, spreading up over the abdomen as high as the umbilicus, and then up the buttocks behind. This is an exceedingly painful and irritable form of eczema. It usually occurs in people who take a considerable amount of exercise and sweat freely in that part. In that case it is necessary to curtail the exercise and not to let the patient walk too much. If the condition is very acute or very painful and there are cracks between the scrotum and the thigh the patient should be told to rest for a time in bed. The parts should be bathed freely with an antiseptic lotion and then carefully dried, and an ointment containing a small proportion of sulphur should be applied accurately all over the parts. It is not necessary in this form to give any internal medicine. It is purely local and requires local treatment for its cure.

Varicose eczema.—The next form, which is exceedingly common in adults, is the form which is associated with varicose veins, namely, varicose eczema. It commences, as a rule, in a single circular patch, which spreads at its edge. There is usually some discharge and the part becomes exceedingly painful, and perhaps it will prevent the patient from walking. In the course of time it may lead to a varicose ulcer. The treatment is rest in bed, with the leg elevated, especially at night, and the application of an exceedingly useful preparation—namely, Unna's zinc glycerine jelly. I do not know of any application of more use for this particular form of eczema. It is made by mixing oxide of zinc, gelatin, glycerine, and water. It can be got from almost any chemist and the way to apply it is rather important. The little cube should be placed in a galley-pot which is dry; the galley-pot is then placed in a pot of boiling water until the gelatin liquefies. As soon as it liquefies the pot should be taken out of the hot water and allowed to cool a little. As soon as it is sufficiently cool to be put upon the skin it should be painted on by means of a large brush. It is important not to move the brush up and down and from side to side. The brush should always be laid on in one direction, preferably from above downwards, beginning with firm pressure. One single application is enough for any one area. It is not suitable if there is much discharge. The gelatin should be applied all over the vein as well as over the eczematous patch. As the gelatin is drying a little cotton-wool should be put upon it so as to make it dry. Then the patient can put on a sock and drawers and he will remain perfectly comfortable. Usually, if the condition of the skin is not too acute, one application will last three days. It should then be taken off, without the application of water, being peeled off like a kid glove. After washing the skin with an antiseptic lotion such as weak carbolic or tar the gelatin should be re-applied. It is exceedingly useful because it enables a patient with that form of eczema to go about his business. It is also applicable to other forms on other parts of the body. It is particularly useful for the trunk, for the back, and for the chest.

Chronic eczema of the leg.—There is another form of the disease which is exceedingly common which practitioners are constantly called upon to treat—namely, the small circular chronic patches which are usually seen upon the leg. A man may have a little patch which he has had for years. He may have no varicose veins and perhaps it has been his habit every day after his bath to scratch this patch. But all of a sudden, for some reason, it becomes acute and may spread rapidly all up the leg, perhaps also over the body. That is the form which authors have called attention to for many years and it is one that I think is of the greatest possible importance—namely, chronic patch on the leg in middle-aged people. A serious effort should be made to try to get rid of the patch. I saw a practitioner to-day who had got an extremely irritable patch about two inches above the outer side of his ankle. He told me that he had had it for years and that he was constantly rubbing it with the other leg, or he scratched it after his bath. I put the drugs which are efficacious for it in the following order: salicylic acid, resorcin, pyrogallic acid, and chrysarobin. These are used in the form of an ointment. I should begin with salicylic acid, 10 grains to the ounce. If that failed I would combine resorcin with it, 15 grains to the ounce. If those two drugs failed I would use pyrogallic acid ointment, five or six grains to the ounce. If, after making the pyrogallic acid stronger it still failed, I should try unguentum chrysarobini of the British Pharmacopœia, but of half strength. The ointment requires to be well rubbed in, and a little should be left on the surface and the parts should be covered with linen and a bandage should be applied. I must leave out many things because time will not permit me to deal with everything.

ECZEMA AT THE MENOPAUSE.

Let us now pass to eczema at the change of life. There are two special forms of eczema which occur at the change of life—and I am taking what I consider to be the commonest, those which come most before practitioners. The two forms at this stage are acute eczema of the head and face, which Jameson says are 75 per cent. of them. As regards that particular type it comes at the change of life—that very variable period which may extend almost to any length of time. We do not know exactly when the nervous influences of change of life begin; they may begin as early as at the age of 40 years or even earlier. In those women who have had their ovaries removed all the phenomena of change of life are produced prematurely. I have recently seen a woman of only 26 years of age, who has had both ovaries removed, who has had all the phenomena of change of life just as if she were 48 or 50 years of age and who is suffering from the skin troubles associated with that period. There is usually considerable flushing, sweating, and other nervous phenomena, headaches, and disturbances of the digestive tract—dyspepsia and constipation. A spare woman at that time of life suddenly begins to flush in the face, perhaps after taking a meal; later the disorder becomes a little more acute; she gets an acute eczema of the scalp and it spreads down all over her face. For that condition there is no drug or combination of drugs as far as I know which is of such service to relieve the symptoms, not only the eczema but all the symptoms mentioned, as ichthyol. If it is used in the right way it is an invaluable drug, and this is one of the diseases in which it is of the greatest possible use. It is a nasty-smelling drug, therefore every attempt should be made to disguise the odour. If it is given in the form of Burroughs and Wellcome's tabloids, which are covered with sugar, there is no difficulty on that score. It can be given in tabloids covered with keratin which does not dissolve until it gets into the intestine, the result being that the patient does not get eructations of the ichthyol. The doses should be two and a half grains to begin with after each meal. At the end of two or three days it should be increased to five grains, then to seven and a half grains, and then to 10 grains. If the patient tastes it much the stomach has got more than it can digest. In that case the dose should be cut down a little. But the effect of the drug in clearing away the symptoms is very extraordinary.

With regard to local treatment, this form of eczema which occurs at the change of life requires rather more active

treatment than is needed at any other time. Such cases usually bear fairly strong applications of sulphur and resorcin.

The other form at change of life is the very acute eczema which occurs about the vulva and anus.

ECZEMA IN OLD AGE.

There is a particular form of eczema in old people which is very serious. First of all, as the result of enfeebled vitality old people get an atonic condition of the skin, and with this a form of chronic eczema with short acute exacerbations which does not disappear in the way in which it does in earlier life. In the aged it may worry the patient nearly into madness by the constant irritation, which, in Macbeth's phrase, "murders sleep," prevents the patients from taking their food properly, and so wears them out. Professor Kaposi has called special attention to this matter of interference with the taking of nourishment. He says that the disease produces a vicious circle in this way: As the result of constant irritation and inflammation of the skin there is a reflex irritation of the intestines which prevents the food from being properly digested. The action of the bowels being irregular it reacts upon the condition of the skin; there is thus a reflected condition from one side to the other. Whether it is absorbed from the skin and so into the blood it is impossible to say, but at all events their sufferings reduce these unfortunate people to the most dreadful condition, and it is not at all an uncommon thing for old people to commit suicide on account of their eczema. I have met with several cases of the kind. There is one drug for it, and only one as far as I know, and that is opium. As some philosopher has said, it is the drug of the aged, and we must not be afraid to use it. It is too much the fashion nowadays to be afraid of opium. If it is given at the right time it is one of the most valuable remedies, and the right time is past middle age. If aged persons do acquire the opium habit what harm is this likely to do them? They have not long to live in any case and the drug may make their few days less evil than they would otherwise be. I have recently had a most striking case of a very old man who was brought up to me from the country by his medical attendant. The man's life is intolerable. What is to be done for him? I have had a letter from the medical man, saying: "The remedy which you have given to my patient is of the greatest possible assistance." It was one-third of a grain of opium three times a day. He has taken it for some weeks; and if he continues to take it to the end of his life what harm can it do him? If it interferes with the action of the bowels that effect can be counteracted by aperients. If we cannot cure the disease it is surely something that by means of opium we are able to give the sufferer relief from a condition which makes his life a burden to him.

THE ACTION OF ARSENIC AS OBSERVED DURING THE RECENT EPIDEMIC OF ARSENIC POISONING.[1]

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IF I may be permitted to give a short account of the general action of arsenic upon the body I think I may be able to classify the symptoms observed in the present epidemic of arsenical poisoning so as to render it easier both to remember them and to understand the varieties which have been described. Arsenic belongs to the same chemical group as nitrogen, which not only constitutes nearly four-fifths by volume of the atmosphere, but is an essential ingredient of all living tissues, and may be called the pivot on which all life turns. Other members of the group are phosphorus and antimony, both of which have an action very much like arsenic in many respects, and phosphorus, like nitrogen, is an important constituent of the healthy body. It is not certain whether arsenic acts by replacing nitrogen or phosphorus in the living tissues, and especially in protagon, which is one of the most important constituents of nerves, but it appears to have the power of altering the chemical changes or metabolism which occur in them during life and on which their functions depend. In minute doses it appears to be beneficial, but in large doses it is poisonous and will destroy both animal and plant life, so that in large quantities it will produce in man or animals irritation and inflammation of any part of the body on which it may be applied. This application may be made directly to a part or the arsenic may reach it through the circulation. Thus arsenic, when it is swallowed, reaches the stomach and intestines by direct application, and by irritating them produces vomiting and purging. In the form of dust, as from wall-paper or in making artificial flowers, it may enter the eyes, nose, and air-passages, and thus it may produce conjunctivitis, nasal and respiratory catarrh, and cough; or it may be applied directly to the skin and cause irritation and eruptions upon it. If much diluted it may produce little or no local irritation of the stomach, intestines, or respiratory passages, but from these it may be absorbed by the blood and carried by the blood to every part of the body. When absorbed from the stomach and intestines it is obliged to pass through the liver before it can enter the general circulation, and consequently the largest amount of arsenic is usually found in this organ after death from arsenical poisoning. Whilst circulating in the blood it may act on the heart, muscles, and nerves. But it is not carried by the blood only to these organs, for through the circulation it goes a second time to the stomach, intestines, respiratory passages, and mucous membranes of the eyes and skin. By these organs it is eliminated, and during the process of elimination it may again give rise to irritation in them just as it would do if directly applied. Moreover, John Hunter, Sir Everard Home, and Sir Benjamin Brodie have shown that when arsenic is applied to a wound it produces more violent and more immediate inflammation of the stomach than when the poison is administered internally and that this inflammation of the stomach precedes any appearance of inflammation in the wound.[2] Brodie concludes that "it may be inferred that arsenic, in whatever way it is administered, does not produce its effect even on the stomach until it is carried into the blood." This conclusion is perhaps too sweeping and not strictly true for arsenic in large doses and in a concentrated form, but it is probably quite correct when the poison is taken in moderate or small doses and in a diluted form, as in the beer at Manchester. Whilst circulating in the blood arsenic is carried to every organ and tissue of the body, and affects markedly the nervous system and muscles, the mucous membranes, and skin. It begins to be eliminated by the kidneys within a few minutes of its absorption and is also eliminated by the mucous membranes and skin. If only small doses are taken daily the whole of the poison may probably be daily eliminated, and it may be taken for months without any harm. But if the doses are larger less is eliminated daily than is absorbed, and it becomes stored in the body and produces symptoms of poisoning. During the process of elimination it irritates all the mucous membranes and the skin and produces corresponding symptoms. By irritating the mucous membrane of the stomach it causes loss of appetite, nausea, vomiting, and epigastric pain. In the intestine it produces colicky pains and diarrhœa. By irritating the respiratory tract it gives rise to coryza, cough, hoarseness, huskiness of the voice, oppression of the chest, retro-sternal pain and bronchitis, with occasional hæmoptysis. In the eyes it causes irritation, conjunctivitis, and œdema of the eyelids. In the skin it produces all sorts of eruptions, nettlerash, redness, papules, pustules, vesicles, and boils. Three of the most marked are pigmentation, herpes, and a condition to which the name of "keratosis" has been given, in which the epidermis peels off the palms of the hands and soles of the feet in large flakes. Keratosis is probably due to the local action of arsenic upon the skin, for Ringer and Murrell found that in frogs poisoned by it the cuticle could be readily stripped from the body, and Nunn showed that this is due to softening of the protoplasm in the epidermis, so that it becomes almost completely detached from the dermis. The herpetic eruptions, as well as loss of hair, brittleness or shedding of the nails, excessive sweating and subcutaneous

[1] A statement made by Sir T. Lauder Brunton to the Royal Commission now sitting upon arsenical poisoning (see p. 1310).

[2] Philosophical Transactions, 1812, Part 1, pp. 209, 210.

œdema, however, are probably dependent rather upon the action of arsenic on the trophic or nutritive nerves of the skin to which reference will afterwards be made. During its circulation in the blood arsenic acts on the muscles of the limbs, on the muscular fibre of the heart, on the liver and other glandular organs, and especially upon the nerve trunks, although it acts, also to a small extent, on the spinal cord and brain. It thus tends to cause anæmia as well as fatty degeneration of the muscles and of the heart, so that the limbs become feeble and the heart so weak that death may occur from its failure. The liver also undergoes fatty change. The nervous system, and especially the nerve trunks, are especially attacked by the poison. Nerve trunks usually contain fibres having three different functions—namely, sensory, motor, and trophic or nutrient, and all those functions are altered by the inflammation which arsenic produces in the nerve trunks. The alterations are of two kinds; first, the nerves are unable to do the things they ought to do; and, secondly, they do things they ought not to do. The sensory nerves, instead of conveying definite impressions to the brain, become dulled, so that the patient does not feel external objects with the same accuracy that he or she ought, and in consequence complains of numbness and may be unable to distinguish where or what things are, and may thus, for example, be quite unable to sew, or even to write, and may drop things from the hand unwittingly, while the patient may feel as if his feet were walking on wool instead of on the floor. At the same time, the sensory nerves convey to the patient impressions for which there is no real objective ground. He may feel as if pins and needles were running into him or insects were running over him, or he may feel intense burning or pain of all sorts in various parts of the body, and both the skin and the muscles may be so abnormally tender that the slightest touch or pressure is not felt as touch or pressure, but causes the most intense suffering. On account of the weakness of the motor nerves the patient soon gets tired and then certain muscles become so weak as to act only imperfectly, or may become completely paralysed and not act at all. On this account the gait becomes feeble and staggering, the feet drop, the hands drop, the patient becomes unable to walk or to stand, and may be even unable to feed himself, while on account of the diaphragm being weak or paralysed the respiration becomes feeble and imperfect. By stimulating the trophic or nutrient nerves, and perhaps by directly altering the tissue change of the parts themselves, arsenic may at first appear to increase nutrition, so that small quantities render animals or men taking it plumper and more active, their hair grows more thickly and their skin appears clearer than before. But if this point be overpassed the animals or men become thinner and wasted, the skin dry and hard, peeling off in scales and often much pigmented. This pigmentation varies in appearance. It is sometimes slight but general, sometimes patchy, and sometimes so generally diffused and deep in colour as to make the patient appear to belong to a dark-skinned race. The peeling of the skin generally occurs in bran-like scales, but the epidermis may separate from the soles of the feet and palms of the hands in very large flakes. To this the name of "keratosis" is given. Local swellings of an œdematous or dropsical nature may occur in various parts of the body and are particularly noticeable in the eyelids. The spinal cord may also undergo alteration, and some of the neuralgic pains, the loss or perversion of sensations of heat or cold, loss of reflexes and want of coördination in movement, may be partly due to alteration in it as well as to alteration in the nerve trunks. In some cases, although rarely, the brain has been found to be affected and symptoms of melancholia or mania have occurred. The nervous ganglia of the heart may be weakened, and this, along with the feebleness of its muscular fibre, already mentioned as due to arsenic, may lead to syncope or even to death. The nerves which regulate the contraction of blood-vessels are said by Böhm to be paralysed by large doses of arsenic, so that the vessels dilate, especially those of the abdomen, and this, along with the weakness of the heart, explains the low tension of the pulse observed in severe cases during this epidemic. The blood-vessels of the soles of the feet and of the palms of the hands become much dilated, so that the skin of these parts towards the outside becomes very red and at the same time it becomes exquisitely tender and very painful. This condition is known under the name of "erythromelalgia."

All the symptoms I have mentioned may occur in chronic arsenical poisoning, but they may not all appear in the same person or to the same extent, for their occurrence may depend upon the quantity of arsenic they have taken, upon the length of time its administration is continued, upon the form in which it is taken, and upon the personal peculiar idiosyncrasy of the person taking it. Small quantities of arsenic, such as one-fiftieth to one-tenth of a grain, may be taken by many people for months together with no apparent bad health, but, on the contrary, with better nutrition and increased strength. In these cases it is probable that the whole of the arsenic is eliminated daily as quickly as it is taken, and that there is no storage of it within the body, but if larger quantities are taken, so that the whole is not eliminated, it will gradually accumulate and symptoms of poisoning begin to occur which may become very severe or fatal. Yet if the administration of the drug be stopped before a fatal issue is reached the poison which has already been stored up in the body is gradually excreted and the patient may recover even when apparently at death's door. But during the process of elimination symptoms of sub-acute poisoning may occur and the arsenic which has been stored up for awhile in the body may in passing out through the mucous membranes of the intestine and stomach irritate them and produce vomiting and purging, as in some of Dr. Dixon Mann's cases, three weeks after the arsenic had ceased to be taken.

The effect of arsenic can be modified by the age, strength, and constitution of the patient taking it, women usually being able to take less than men and children very much less than either. Susceptibility to arsenic varies very considerably, and while three minims of Fowler's solution, which is a 1 per cent. solution of arsenic and is the preparation commonly given in medicine, will sometimes cause such symptoms of intestinal irritation as will necessitate its discontinuance, other patients will take 30 minims, or even more, three times a day without any discomfort whatever. The way in which it is given alters its action, so that if five minims of Fowler's solution were given on an empty stomach three times a day it would probably produce irritation of the stomach and intestines, whereas if given when the stomach was full it would be diluted by the food and be absorbed without producing any local irritation whatever. When much diluted in the form of beer the local action of arsenic on the stomach and intestines at the time of taking it is probably very slight and the gastro-intestinal irritation observed during this epidemic was comparatively trivial as compared with the other symptoms and was probably due to irritation of the mucous membrane occurring during its elimination. During the circulation of arsenic in the blood it is not improbable that its action may be determined to one part of the body or to another by other substances taken at the same time. A well-marked instance of this kind of action is known in the case of mercury. Alcohol is well known to have a strong affinity for the nervous structures in the body, whilst that of mercury is much less. But alcohol seems to direct mercury to the nervous system and cause it to act upon them. An example of this is given by the fact that during the preparation of an alcoholic compound of mercury, called mercuric methide, two chemists who were subjected to the fumes were poisoned by the compound and showed signs of nervous disease, one of them becoming maniacal and dying within three months, and the other becoming idiotic and dying after about a year's confinement in a lunatic asylum. Osler has observed that mercury taken along with alcohol seems to have more tendency to produce peripheral neuritis than if taken alone, the alcohol seeming, as it were, to direct the mercury to the nervous system. If the statements made by some of the patients who have suffered in the present epidemic of this arsenical poisoning as to the quantity of beer they have taken are correct, the amount of arsenic consumed in some cases must have been so exceedingly small as to lead one to ask whether the neuritis can be due to arsenic alone, even though its action may have been directed to the nerves by alcohol or hops, or whether some other poison besides arsenic has not been present in the beer, or whether the arsenic is not present in such a combination as to have a much more deleterious action than that of pure arsenic itself. There are difficulties in accepting the statements of some of the patients as correct for in the case of Alice Booker, which terminated fatally, and in which Dr. Stevenson separated a weighable quantity of arsenic from the viscera, the patient only admitted having taken less than one pint per diem. It is quite possible that arsenic may be present

in beer, combined with either a hydrocarbon or with a proteid, for although it is said not to unite with albumin to form an albuminate it has been found to enter into combination with casein. At present, however, this is only a hypothesis, and Professor Hewitt and I are at present engaged in investigating the subject. It is, however, a research full of difficulties, and if we succeed in obtaining definite results at all it will probably not be until after the expiration of several months at the earliest.

In an epidemic of arsenical poisoning at Würzburg, where the arsenic was contained in bread, only one case of paralysis was observed in 373 cases of poisoning. This extraordinary want of action on the motor nerves when taken in bread as compared with its action when taken along with alcohol in beer or wine tends to substantiate my hypothesis.

I have heard doubts expressed as to whether the epidemic in Manchester was due to arsenic at all, and I confess that when I first went I thought that possibly the symptoms might be caused by organic impurities in beer, such as some of the higher alcohols—e.g., fusel oil, by albumoses, or by furfural. But an examination of the facts has convinced me that the epidemic was due entirely, or almost entirely, to arsenic. No doubt neuritis may be produced by toxins of an albuminous nature, such as occur in the body in diphtheria, in plague, and in beri beri, or are found outside the body in diseased grain, such as ergot and maize, producing ergotism and pellagra. But in the present epidemic the cases of illness were distinctly traced to beer. There was no diseased grain used in its production, no evidence of any infective disorder; in fact, there has been no evidence of the presence of anything excepting arsenic, and possibly selenium, that would produce the symptoms. These symptoms, consisting in a combination of gastro-enteric irritation, peripheral neuritis, pigmentation, and eruptions of the skin, are almost characteristic of arsenical poisoning. They occurred in previous epidemics. For instance, in the one which occurred in Hyères, in which a number of persons were poisoned by arsenic in wine, the symptoms were almost identical with those of the present epidemic. In both these epidemics the symptoms may be conveniently classed in the manner adopted by MM. Midal and Ollivier for those observed at Hyères into—(1) digestive, (2) cutaneous, and (3) nervous. In both epidemics the digestive symptoms were not nearly so prominent as would have been expected from the well-known irritant action on the digestive canal which arsenic produces in cases of acute poisoning, and in some cases symptoms of this sort were completely absent. They seem to have been rather more marked at Hyères than at Manchester, a circumstance which one would naturally expect both from the more irritating action of wine as compared with beer on the mucous membrane of the stomach and intestine, and from the larger proportion of arsenic in the wine (0·08 gramme per litre). The digestive symptoms were alike in both epidemics—viz., loss of appetite, vomiting, abdominal pain, and diarrhœa. Retro-sternal constriction or pain was noted in both, and I have mentioned it already along with cough, but at Hyères it was attributed to digestive derangement. In both epidemics the symptoms produced during absorption were slight in comparison with those which occurred during the circulation of the poison in the system and during its elimination. The cutaneous symptoms which occurred were of the most varied kind in both epidemics. In Hyères the forms were so manifold as to exhaust dermatological nomenclature, and they were no less so in Manchester. In both epidemics two of the most striking cutaneous symptoms were pigmentation of the surface generally and separation of the epidermis from the feet and hands in such huge flakes that it seemed as if the whole skin of the soles and palms came off in one piece (keratosis). At Hyères coppery patches on the skin and an eruption the colour of burnt coffee were noticed, but the pigmentation does not appear to have been so dark or so extensive as in some of the cases at Manchester. In both epidemics the nervous symptoms were the most important, and in both cases they were at first attributed to alcohol and not to arsenic. In both epidemics, although numbness and loss of sensation were observed, they were not such prominent symptoms as pain and tenderness, weakness and paralysis. In both pain was a most marked feature, varying in intensity from slight "pins and needles" to most intense agony; and a very striking symptom was extreme tenderness to touch or pressure, so that the patients could not bear the pressure of the bedclothes on their limbs. Extreme tenderness of the calves and other muscles of the body on pinching, as well as the redness and exceeding painfulness of the soles of the feet and palms of the hands (erythromelalgia), which were so marked in the Manchester cases, are less prominently noticed in the accounts of the Hyères epidemic. Something of the same kind seems, however, to have been present, for the patients are said to have complained of pain as if dogs were gnawing their calves and the soles of their feet. In both epidemics the muscular weakness or paralysis, the difficulty in walking, the peculiar gait, and sometimes the complete inability to stand, were all alike. Both resembled each other, also, in the affections of the respiratory system; indeed, with the slight difference indicated already, the symptoms in one epidemic might stand for those of the other. In both epidemics there can be little or no doubt that the symptoms were chiefly, if not entirely, due to arsenical poisoning, for (1) there was an absence of any other sufficient cause; (2) there was sufficient arsenic to cause symptoms of poisoning; and (3) the symptoms corresponded with those which have been observed in cases of chronic poisoning by arsenic taken in other ways.

When I first went to Manchester to investigate the epidemic I started with the idea that the symptoms of poisoning were probably due, not to the arsenic in beer, but to some other impurity, but I soon found that the arsenical origin of the epidemic could be proved beyond a doubt. The present epidemic is certainly due to contamination of beer through glucose and invert sugar made by one particular firm, who had been supplied with sulphuric acid containing a very large quantity of arsenic. The extraordinary number of cases of peripheral neuritis which have occurred in this epidemic, together with the fact that this disease has been specially observed and described by two Manchester men, the late Professor Ross and Professor J. Dreschfeld, naturally raises the question whether the peripheral neuritis, a disease which is commonly attributed to alcohol, is not caused in most, if not in all, cases by arsenical poisoning and whether poisoning by arsenic may not have been going on to a greater or less extent in Manchester for many years. A good deal may be said on both sides of this question. On the one hand, it cannot be denied that peripheral neuritis may be caused by toxins, for it is found in diphtheria where no poison except that of diphtheria has gained access to the organism, and Sidney Martin has shown that the diphtheritic toxin, apart from the bacillus, will produce neuritis in animals. But, on the other hand, although it is commonly supposed that alcohol will cause the disease, it is by no means certain that ethylic alcohol will do so, and alcoholic neuritis in spirit-drinkers may possibly be due to other substances than ethylic alcohol. A remarkable observation was made to me in a letter by Sir William Gairdner. About 16 years ago he was examining in Manchester and went through the wards of the late Dr. Ross. He saw there several cases of peripheral neuritis and was much astonished because he could not recollect seeing more than two cases in Glasgow in all his life. He wondered if he could have overlooked the disease, but after consideration he came to the conclusion that it did not exist in Glasgow, notwithstanding the large quantity of whisky which was drunk there and ought to have produced the disease if it were due to alcohol as usually supposed. The fact that arsenic has now been found both in hops and malt renders it not improbable that cases of peripheral neuritis in Manchester may for years past have been due to a certain amount of contamination of beer by arsenic through hops and malt, and although it is not yet certain it seems probable that this contamination may have arisen from the use of coal or coke containing arsenic in the process of drying.

The recent and remarkable discovery of selenium in beer by Dr. Tunnicliffe imports a new factor into the question, but further information is required before any conclusion can be arrived at as to whether this substance may be partly to blame for producing neuritis, and if so to what extent.

The occurrence of this epidemic has caused an outcry against the practice of using glucose and invert sugar in brewing and a demand that only barley and hops shall be employed. But I am informed that this would render it difficult to brew the light beers similar to the German lager or Pilsener beers which have come to be so extensively drunk in this country within the last 30 years. I regard the introduction of such light beers as a benefit to the public, for it

supplies a drink which can, if pure, be taken without causing the heaviness, drowsiness, stupidity, and headache which so commonly follow the consumption of heavy ales.

Although this epidemic has done much harm, has caused great pecuniary loss to the brewers, who were not to blame, and, still worse, has caused great pain, paralysis, and, in some cases, death, to the unwitting consumers of the contaminated beer, it has not been without its advantages. For it has shown how a poisonous substance may find its way into a chemical, and through it, not only into beer, but many other substances used as food. It has shown, also, how a poison like arsenic may find its way into food in such unexpected ways as through hops and malt and thus enforces the necessity of guarding the consumer, not by placing restrictions upon manufacture, but by demanding that the manufacturer shall in the future be held responsible for the purity of the articles he sells, and that all materials for beer or foodstuffs should be sold with a guarantee of purity which should be rigorously enforced.

Stratford-place, W.

SOME FURTHER INVESTIGATIONS UPON RHEUMATIC FEVER.

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SINCE our first contribution to this subject, published in THE LANCET of Sept. 22nd (p. 861) and 29th (p. 932), 1900, we have continued our investigations and have now isolated the diplococcus from 16 cases of rheumatic fever. The particular point upon which we are still intent is to establish this diplococcus as a cause of rheumatic fever. If this can be firmly established then the many difficulties that must subsequently be faced can be dealt with from a firm basis. In no disease perhaps more than in rheumatic fever is it necessary to make this ground sure, for it is in the centre as it were of a group of diseases, which not only may resemble rheumatic fever closely in their clinical features, but which are also the result of infections in all probability closely allied to the infection of rheumatic fever. The differential study of the streptococcal, staphylococcal, pneumococcal, gonococcal, scarlatinal, rheumatic, and probably rheumatoid infections is one of great difficulty. The morphological characters of the various organisms can only offer a partial assistance and chemical pathology has not yet advanced sufficiently to render much service, though the important investigations of Dr. Sidney Martin upon diphtheria and ulcerative endocarditis and the numerous researches both in this country and on the continent into the nature of the toxic processes due to microbic infections are indications of the increasing importance of this subject. It is for these reasons that we have entered into such detail in our efforts to prove that this diplococcus is a cause of rheumatic fever, and it is upon this detail that we especially rely.

I.—THE ISOLATION OF THE DIPLOCOCCUS FROM THE NODULE.

The first series of additional facts that we are able to bring forward in this paper is concerned with the rheumatic nodule. We have succeeded in demonstrating the organisms in two more nodules and have in addition grown them in the nodular tissue outside the body in pure culture. We have produced in a rabbit, as the result of an intravenous inoculation from this culture undertaken for us by Mr. H. G. Plimmer, pathologist to St. Mary's Hospital, a condition we believe to be that of acute rheumatism—namely, polyarthritis, pericarditis, and multiple valvulitis, all non-suppurative. Finally, we have isolated the organisms in pure culture from the joints of the animal after death and thus completed the chain of proof. And since these formations are looked upon by general consent as highly characteristic of rheumatic fever the isolation of this diplococcus from one of them will appeal to many as a strong link in the proof of the causal relation of these organisms. A short outline of the investigation and the sketches subjoined will give a clearer idea of the value of this evidence. We are indebted to Dr. W. B. Cheadle for permission to make use of the clinical notes of the case and to Mr. H. G. Plimmer for the details of the necropsy.

A child, aged nine years, was admitted to St. Mary's Hospital on Nov. 3rd, 1900, suffering from acute rheumatism. When four years old she had suffered from chorea and since then from three attacks of acute rheumatism. The present illness had commenced four weeks before admission with arthritis and for three weeks there had been shortness of breath. The patient was pale and thin, the pulse-rate was 100, the temperature was 102·4° F., and the respirations were 40. There was dyspnœa and there was also advanced heart disease. Both the mitral and aortic valves were affected and the heart was dilated, but there was no sign of pericarditis. The knees and right elbow-joint were painful but there was no effusion. Over both elbows and over the knuckles there were numerous small nodules. The urine contained a trace of albumin. At first the child seemed to improve, though it was noted that the nodules were increasing in size. On Nov. 7th acute œdema of the lungs developed and proved rapidly fatal.

The necropsy showed recent transparent, bead-like vegetations upon the mitral, tricuspid, and aortic valves, and the mitral and aortic valves were also thickened from the results of previous inflammation. There was no pericarditis but there were 25 cubic centimetres of a straw-coloured fluid in the pericardium. The lungs were œdematous and in some places there were hæmorrhages into the alveoli and in others collapse. The liver was "nutmegged," the spleen was small and firm, and both kidneys showed cloudy swelling of the parenchyma of the convoluted tubules. Two hours after death we removed three nodules from the right elbow with strict aseptic precautions. One of these we at once placed in the medium of milk and bouillon rendered slightly acid with lactic acid. The second we cut with a sterile knife, then scraped, and with the scraping inoculated a second tube. The third we "fixed" at once in perchloride of mercury. Both tubes were incubated anaerobically. The tube inoculated with the exudation remained sterile. The tube containing the entire nodule showed no growth upon the first day, but upon the third day a pure culture of the diplococci. The organisms were transferred to blood-agar tubes and grew in the usual small, white, discrete colonies. The contents of five of these tubes were injected intravenously into a rabbit on Nov. 11th. The result of the intravenous inoculation was as follows. The next day the heart was very rapid and there was a definite systolic mitral murmur, and upon the second day the hind limbs were stiff. The murmur then disappeared, but a week after inoculation the left fore and hind limbs were almost powerless, and in the next few days this weakness and stiffness spread to all four limbs. A fortnight after inoculation a systolic murmur had reappeared and there was definite pericarditis, but the stiffness had disappeared and the joints were none of them swollen. We were anxious to obtain a definite arthritis with effusion, because we have found that these effusions afford the easiest and most reliable local lesions from which to cultivate the organism. Accordingly, on Nov. 26th—that is, the day after we had noticed that the stiffness had disappeared—the animal was again inoculated with the organism which had been kept growing in the acid milk medium. Two days afterwards stiffness of the limbs appeared, then the right shoulder swelled, and five days afterwards both knee-joints. The animal was killed next day and the post-mortem examination showed mitral and tricuspid valvulitis, pericarditis of some standing, and an opaque fluid in the right knee-joint. There was no suppuration in the viscera. Cultivations were taken from the joint and a pure growth of the diplococcus obtained. The nodule which had been incubated was by this time in a pulpy condition from the effects of the liquid medium in which it had been lying. This we fixed and hardened in alcohol and finally embedded and cut in paraffin. The accompanying illustration (Fig. 1) shows the prolific growth of the diplococci. The nodule that we fixed in perchloride of mercury was also hardened and cut, and in the outer zone we found some groups of the diplococci (Fig. 2). It will be seen from this account that every circumstance was favourable for the success of this investigation and the proof a very conclusive one. In our previous papers we also recorded that intravenous inoculations of the diplococcus had produced in one instance a nodule over a vertebral spinous process and nodular formations around the joints which microscopically resembled the

structure of an early nodule in man. Also that subcutaneous injection of a virulent culture had produced a large swelling which, slightly tender at first, had gradually disappeared without any evidence of suppuration.

This method of incubating the nodule may possibly be of some service to others who are interested in this subject. We believe that in the local lesions of rheumatic fever the

FIG. 1.

A section through the outer zone of a recent rheumatic nodule, showing groups of the diplococci lying in the interstices of the swollen connective tissue. The nodule was removed with strict aseptic precautions two hours after death and at once placed in a saturated solution of perchloride of mercury.

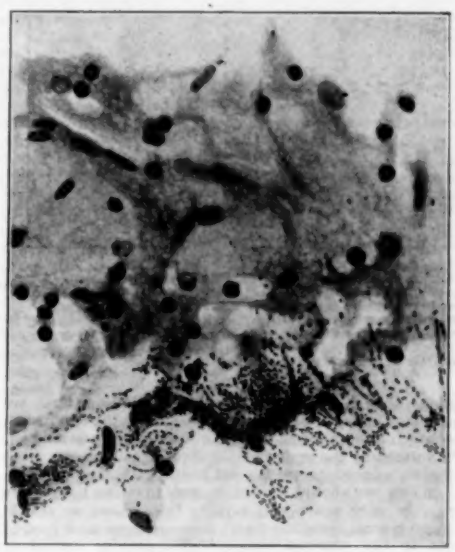
struggle between the organisms and the tissues is so evenly balanced that in many instances at the time of death the diplococci are many of them destroyed. If, then, with due precaution, a lesion in the so-called "active" stage be removed and incubated in a suitable medium the organisms should grow, for there is now no resistance to prevent their growth. It is very possible that they do not regain their full vitality, but they can be easily demonstrated and may, as we have shown, produce experimental results. Recently we have adopted this method for the cardiac valves and instead of curetting them have snipped off the granulations, incubated them in the acid medium, and in this way obtained a pure growth of diplococci.

Summary.—To sum up, (1) we have demonstrated the diplococcus in three rheumatic nodules taken from two cases of rheumatic fever; (2) we have isolated the diplococcus from the nodule in one instance in pure culture; (3) intravenous inoculation of this culture has produced valvulitis, pericarditis, and polyarthritis in a rabbit; (4) we have isolated the diplococcus from the joint exudate of this rabbit; and (5) the nodule is looked upon as a highly characteristic manifestation of rheumatic fever, therefore we conclude that this investigation lends strong support to the contention that this diplococcus is a cause of rheumatic fever.

II.—OBSERVATIONS UPON THE PATHOLOGY OF RHEUMATIC CHOREA.

In our paper upon the Pathogenesis of Rheumatic Fever, read before the Pathological Society of London in October, 1900, we recorded a condition produced by the intravenous inoculation of the diplococci into a rabbit which we believed to be chorea. This rabbit was extremely nervous, and in addition manifested sudden twitching movements of the limbs and face. These movements were definite, but not violent, and there was about them that peculiar, sudden, involuntary character, which is so characteristic of slight rheumatic chorea. At the time of the reading of this paper we had not examined the brain further than to be able to state that there was no visible meningitis. Since then we have investigated much of it and have found diplococci in the pia mater and in the endothelial cells of the blood capillaries, dipping into the motor cortex from the surface (Figs. 3 and 4). The pia mater in places showed some slight swelling of its connective tissue and cell exudation. The organisms were also present in the walls of some of the blood-vessels of the pia mater. The rabbit, which suffered from chorea and also valvulitis and polyarthritis, was the only one in a series of inoculations from animal to animal that showed these movements. The others (rabbits No 1, 2, 3, 4, and 5 in the original paper in THE LANCET) showed numerous manifestations of rheumatic fever but not any movements of this nature. The fatal case of rheumatism from which the culture was obtained was recorded (Case 4) in THE LANCET and the growth was obtained in the pericardial fluid itself after incubation. On another occasion we isolated the diplococci from the cerebro-spinal fluid of a rabbit suffering from valvulitis and pericarditis, but the animal had shown no signs of chorea. Again, we noted in a third rabbit weakness of the hind limbs, which we suggested might be paralytic chorea. In a case of fatal chorea we discovered micrococci in the mitral valve and in the motor cortex, but the organisms were never isolated, and this observation at the best is not more than suggestive. Finally, on three occasions we have isolated the organisms from the blood in acute rheumatic pericarditis. This is a proof that they circulate in the blood stream, and therefore presumably circulate in the cerebral vessels and possibly escape to the cerebral tissues in acute rheumatism with pericarditis.

FIG. 2.

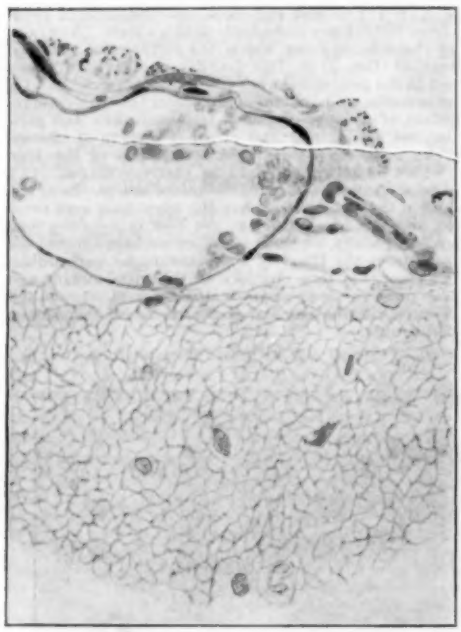


Section through a rheumatic nodule removed two hours after death with strict precautions and incubated anaerobically in the milk, bouillon, and lactic medium. The tissues are altered in appearance from soaking in the medium previously to fixation, but the free growth of the diplococci is clearly seen at the lower margin of the figure.

The conclusion to which these observations appear to lead is this—that the commencement of rheumatic chorea is associated with the presence of the diplococci in the brain and perhaps pia mater, as well as with the presence of toxins produced by these organisms. If this be so, then we should be prepared to find that, with due allowance for the special anatomical characteristics of the brain, the morbid changes produced would be analogous to those presented by the other local manifestations of rheumatic fever. We can speak with

confidence of the nature of these changes in the cardiac valves, myocardium, pericardium, and nodules. The connective tissues swell, there is hyaline degeneration, and there may be necrosis. The connective tissue cells proliferate. Where there are blood-vessels there is hyperæmia and there may even be small hæmorrhages; there is also fibrino-cellular exudation. The cardiac muscle fibres then lose their striation and there may be well-marked fatty changes. If the process has been less severe but of long duration there is sclerosis spreading, especially from the position of the small blood-vessels. Then we also know that the diplococci in the valves, pericardium, and nodules are rapidly destroyed at the sites of

FIG. 3.



A section through the pia mater and adjacent brain tissue of a rabbit that suffered from polyarthritis. Mitral valvulitis and choreiform movements, the result of intravenous inoculation with the diplococcus. Numerous diplococci are seen in the pia mater close to a large capillary, the lumen of which is only partially visible in the figure. The connective tissue of the pia mater is slightly swollen.

the lesions, though it is probable that the poisons that are produced may linger after the disappearance of the organisms. But we are in ignorance as to the nature of any poisons that may be formed by the action of the diplococci.

If these observations are applied to the pathology of rheumatic chorea we should expect to find that the lesions are various. In very acute and rapidly fatal cases we should expect hyperæmia, possibly small hæmorrhages, and foci of necrosis in the cerebral tissues; also minute emboli or thromboses in the terminal capillaries. In the less acute cases we should expect changes in the region of the minute blood capillaries, such as cell-exudation and cell-proliferation and also degeneration of nerve-cells. In the chronic cases we should expect perivascular fibrosis and small areas of sclerosis. There would probably be considerable difficulty in demonstrating the organisms, especially in the more chronic cases; on the other hand, it is quite possible in some cases that they may be present in sufficient numbers to block the most minute of the blood capillaries, or escaping from the vessels into the brain tissue to set up such swelling in the neighbourhood of these minute capillaries as to cause their occlusion from pressure upon the delicate walls. Our investigations throw no light upon the regional localisation of chorea, neither do they throw light upon the action of toxins or the characteristics of the brain itself, both most important factors in the pathology of chorea. It would, however, appear probable that the actual commencement of chorea in rheumatism is usually associated with the presence of the diplococci in the brain.

Up to this point we have contented ourselves with reasoning from our facts upon the pathology of chorea. It now remains for us to allude to some of the numerous observations of other investigators upon this subject which have, it is clear, guided us in arriving at these conclusions and which are of the utmost importance in any investigation of such a nature as this one. In 1863 Dr. Kirkes,[1] noticing the constant presence of vegetations on the valves of the heart in fatal chorea, suggested that the disease might be caused by the irritation produced in the nerve centres by fine molecular particles of fibrin which were set free from the inflamed endocardium and carried by the blood current into the capillaries of those cavities. Dr. Hughlings Jackson[2] in 1864 wrote: "I think from many circumstances that embolism is a frequent cause of chorea. I do not say plugging of the trunk of the middle cerebral, but probably of some of its ramuscules which supply convolutions near to the corpus striatum." In 1865 Sir William Broadbent,[3] by an independent research, arrived at much the same conclusion as had Dr. Hughlings Jackson, and also laid stress upon the importance of alterations in the blood as a predisposing cause. Dr. H. M. Tuckwell[4] in 1867 published

FIG. 4.

A capillary blood-vessel in the motor cortex of the rabbit's brain (*vide* Fig. 3), showing the organisms in the endothelial cells.

a case of chorea in which the necropsy disclosed an extensive superficial softening of the convolutions the result of embolism. And again in the St. Bartholomew's Hospital Reports for 1869 he recorded another fatal case in which there was embolism of the right posterior cerebral artery and figured in a plate both the mitral valve and the vessel that had been plugged. It is impossible to over-estimate the value of those researches, for they at once brought

[1] New Sydenham Society's Year-book, 1863, Summary by Dr. Handfield-Jones.

[2] London Hospital Reports, 1864, vol. i., p. 459; THE LANCET, Nov. 26th, 1864, p. 606; Note on the "Embolic" Theory of Chorea, Brit. Med. Jour., Dec. 23rd, 1876.

[3] Brit. Med. Jour., 1869.

[4] British and Foreign Medical and Chirurgical Review, p. 506; St. Bartholomew's Hospital Reports, vol. v.

the subject into the field of controversy and put forward an hypothesis capable of proof or disproof.

The whole question of cerebral disease was further advanced by the experimental researches of Fitz, Hitzig, Ferrier, and others upon cerebral localisation. Later opponents arose to the embolic theory, Ogle, Barnes, Dickinson, Bristowe, and Bastian in particular advancing objections to this hypothesis. Dr. Dickinson,[5] in 1876, wrote thus upon this question: "We see in chorea a widely distributed hyperæmia of the nervous centres, not due to any mechanical mischance, but produced by causes mainly of two kinds—one a morbid, probably humoral, influence which may affect the nervous centres as it affects other organs and tissues; the other, irritation in some mode, usually mental, but sometimes what is called reflex, which especially belongs to, and disturbs, the nervous system and affects persons differently according to the inherent mobility of their nature. The course of the disease is sufficiently traced in hyperæmia and its results." Dr. H. C. Bastian[6] in 1877, in a paper entitled "Remarks on the Pathology of Chorea," writes: "In common with many who have spoken with greatest authority on this subject I look (certain rare cases excepted) to an altered and often anæmic blood-state as its predisposing cause in individuals of a certain age and nervous temperament. Secondly, I look to the irritation in such individuals of a disturbed nutrition in the corpora striata and adjacent parts of the brain, tending to issue and often actually issuing, in what for want of any more appropriate term may be called a subacute inflammation of these centres—often characterised in part by the production of multiple minute thromboses." In 1878 Dr. Hughlings Jackson, after alluding to those cases of chorea in which Dr. Bastian found plugging due to thrombosis, writes: "It may be, I would admit here, that the hypothesis of embolism will be displaced by Bastian's hypothesis of thrombosis as an explanation of many cases of chorea." In a footnote to this paper he further writes: "Having regard to the great elaborateness of the movements in chorea I still think it most probable that the convolutions are the parts diseased." Since the time of those papers numerous investigators in England and on the continent have proved beyond controversy that chorea and rheumatic fever are very frequently associated, so frequently, indeed, that some have thought that all chorea was the result in some way or other of rheumatism. As this association became more certain it was natural that the view that some poison the result of the rheumatic state was the actual cause of chorea should gain many adherents. A considerable amount of information has also been gained about the morbid anatomy of fatal chorea, though, as pointed out by Dr. Risien Russell[7] in his article upon Chorea in Professor Clifford Allbutt's "System," many of these investigations have not been sufficiently thorough. It is easy to understand the difficulty of such investigations when it is borne in mind that those who have undertaken them have had but little to guide them as to what to look for or where in such a large organ as the brain to look. It would appear, nevertheless, that the more careful the researches the more frequently have some definite morbid changes been discovered.[8] Hyperæmia appears to be common, as also softening from the effects of minute emboli.[9] Punctiform hæmorrhage and perivascular exudations have also been found.[10] The late Dr. Charlewood Turner[11] described cloudy swelling of the large pyramidal cells, and Dana[12] hyaline swelling of nerve cells and chronic lepto-meningitis.

Another result of the establishment of the association of rheumatic fever and chorea was the view that the changes in the brain were analogous to those which occur in the valves of the heart and in the subcutaneous nodules. To quote from the Harveian Lectures for 1888, by Dr. W. B. Cheadle,[13] "I may point to the possibility of some proliferative change in the neuroglia akin to that of the fibrous tissues elsewhere as a point which needs examination." If these local lesions in rheumatic fever be each one of them looked upon as an individual and complete rheumatic process, then we have the clinical expression of such a view as the above in the statement by Sir Dyce Duckworth[14] that chorea is cerebral rheumatism, in support of which in 1894 he read a paper at Rome at the International Congress of Medicine. Again, in a recent communication to us Dr. Hughlings Jackson refers to the possibility that some of the changes in the brain are analogous to those found in the cardiac valves and subcutaneous nodules. On the other hand, the view that chorea was in most part the direct effect of rheumatic fever was opposed by such an authority as Sir William Gowers[15] in his "Manual of Diseases of the Nervous System" in 1893. He admitted the frequency of association of the two, but writes: "The hypothesis which seems best to explain the facts is the old theory that the common cause of the endocarditis and the chorea is a blood state allied to, but not identical with, that which causes acute rheumatism." He considered that the facts suggested a toxic change of a chemical character rather than an organised virus.

One of the most recent researches upon the morbid anatomy of acute chorea is that of Dr. Bertram Abrahams.[16] The patient, aged 28 years, was pregnant; there was a history of scarlet fever but not of rheumatic fever and during life there was a systolic mitral murmur pointing to slight mitral endocarditis. The illness lasted from April 25th, 1899, to June 1st. The motor cortex showed changes, especially up the right side in the region of the right parietal lobe. In this region there was a profuse exudation of small cells which were found to be uninuclear leucocytes. In some sections these cells could be traced passing through the walls of the small blood-vessels and outside the vessels occupied the peri-neuronal lymph-spaces. There were haziness and swelling of the pyramidal cells. There was no trace of micro-organisms. Dr. Abrahams in his comment writes as follows: "I would venture, however, to submit that it tends to support the following general deductions. Firstly, the changes noted are sufficient to explain the clinical manifestations of the disease on the ground of disturbances in the cells of the so-called motor cortex. Secondly, their nature is such as to be susceptible of complete and rapid recovery—a fact in harmony with the description of the disease as functional. Thirdly, there is nothing in them inconsistent with the conception of chorea as an affection produced by a blood state—namely, the rheumatic toxæmia." With the development of bacteriology new facts were obtained, and during the last 15 years the opinion that rheumatic fever was of microbic origin has steadily gained ground. This resulted in the recognition of the possibility that some bacterial poison might be the cause of rheumatic chorea, an idea strengthened by the analogy of the occurrence of diphtheritic paralysis as the result of the infection with the specific bacillus of diphtheria. But though the view that the condition might be the result of some poison circulating in the blood gained in force, there still, we believe, must be recognised the clinical fact that rheumatic chorea is often remarkably asymmetrical in its distribution, sometimes focal, and this, we think, militates against the theory of a diffuse poison being the only casual agent and points rather to multiple local lesions being present in addition to the more diffuse cerebral toxæmia.

Finally, within the last 10 years various observers have isolated organisms from the brain and its pia mater in fatal chorea. The organisms most usually found have been cocci,[17] though Pianese[18] in 1893 isolated a bacillus which produced convulsions in animals. In 1894 Dana[19] isolated a diplococcus from the meninges, and in 1898 Apert[20] isolated a diplococcus from the brain and was of opinion that the organism was similar to that described by Triboulet[21] as a cause of aggravated rheumatic fever. In 1899 Wassermann and Malkoff[22] isolated from the brain in a fatal case of chorea a diplococcus which produced fever and multiple arthritis in a series of 80 rabbits. This diplococcus Professor Wassermann considered to be the specific cause of rheumatic fever. In 1899 Maragliano[23] as a result of his researches considered chorea to be a cerebral

[5] Transactions of the Royal Medical and Chirurgical Society, 1876.
[6] Bastian: Remarks on the Pathology of Chorea, Brit. Med. Jour., Jan. 13th and 20th, 1877.
[7] and [17] Chorea: System of Medicine, Allbutt, vol. vii.
[8] Raymond: Bulletin Médical, Paris, 1896, vol. x.
[9] Pathological Anatomy of Chorea, Brain, 1890.
[10] Ibid.
[11] Transactions of the Pathological Society of London, 1892, vol. xliii.
[12] Loc. cit.
[13] Manifestations of the Rheumatic State, Harveian Lectures, 1888.
[14] Atti dell' XI. Congresso Medico Internazionale, Rome, 1894, vol. iii.
[15] Manual of Diseases of the Nervous System, 1893, p. 854.
[16] Cortical Changes in Acute Chorea, Transactions of the Pathological Society, 1900.
[18] La Natura infettura della Corea del Sydenham, Napoli, 1893.
[19] The Microbic Origin of Chorea, American Journal of the Medical Sciences, 1894, p. 31.
[20] Comptes Rendus de la Société de Biologie, Paris, 1898, vol. v., p. 128.
[21] Ibid., 1898, vol. v., p. 214.
[22] Berliner Klinische Wochenschrift, 1899, No. 28, p. 638.
[23] Centralblatt für Innere Medicin, 1899, Band xx., p. 489.

infection by staphylococci, and maintained that the disease was due either to the presence of these organisms or to the poisons which they produced. In 1900 we produced chorea in a rabbit by the intravenous inoculation of a diplococcus which we believe to be a cause of rheumatic fever, and demonstrated the organisms in the pia mater and in the endothelial cells of the blood capillaries dipping in the cortex.[24]

It remains for us to consider some of the clinical characteristics of rheumatic chorea and to attempt to explain them by the hypothesis that in most cases, possibly all, the commencement of the disease is the result of the actual presence of the diplococci together with the poisons they produce in the brain. Any such considerations must be limited by our ignorance of the part taken in the disease by the brain itself, which fact is without doubt a very important one, and also by our ignorance of the exact action of the toxins that are produced by the organisms. Further, our observations do not throw any definite light upon the localisation of the lesions. The hypothesis involves the consideration of two morbid processes in the actual production of the disease—one, focal, dependent upon the tissue-changes in the regions where the diplococci are located, the other dependent upon the toxic effects of the poisons upon the nerve elements. How much is to be attributed to each factor will be made far more clear when these poisons can be isolated and studied by experiment.

The onset of chorea is usually gradual, sometimes acute, in rare cases almost sudden. In the acute it is reasonable to suppose that there is invasion of the brain by diplococci. It is possible that they escape from the vessels and set up swelling and exudation in the surrounding tissues, just as in the nodule they may quite rapidly give rise to a swelling which is perceptible to the eye. In cases of more gradual onset the invasion is probably less severe either in the intensity of virulence or in the number of the organisms that gain access to the brain. The symptoms are sometimes focal and sometimes general, because there are the two processes dependent upon the factors mentioned above. The lesions that are produced usually resemble those represented by the nodules in the completeness of their recovery and also in the varying duration of this recovery. The analogy cannot, however, be pushed too far. We recognise that there is this peculiarity about the cerebral processes, that they are of such complexity that when disordered they are especially slow to return to normal, although the actual cause of the disturbance may have been removed. Some rare cases are fatal, the intensity of the disease resembling then the severe types of rheumatic pericarditis. Other cases recover only partially and for years a chronic condition of disordered movement persists. We should suspect that this points to some actual, though slight, multiple organic lesion, and in such cases, also, some peculiarity in the brain itself is highly probable. This view is supported by the pathological changes that have been found in that chronic progressive form of chorea known as Huntingdon's chorea. It was clearly demonstrated by the earliest investigators that the paralytic manifestations mean a more severe nerve lesion than the incoördinate movements. These paralytic symptoms we would associate with acute local tissue changes in the regions invaded by the diplococci.

That only certain cases should develop chorea is remarkable and cannot as yet be explained, but it is only a further evidence of the remarkably specific action of the more complex poisons, the truth of which we have been led to recognise by the study of peripheral neuritis. There is little doubt, too, that in children more cases than are perhaps generally recognised present slight manifestations of chorea during acute rheumatism (a point which has been emphasised by Sir Thomas Barlow), and still more cases without presenting evidence of actual chorea, are highly nervous and excitable during an attack of rheumatic fever. That the disease should be common in children and rare in adults is in accord with what is found with many other acute infections; the child is less resistant to them than the adult, and the manifestations are more widespread.

The causal relation of fright to chorea is, and always has been, a great difficulty. Some authorities—for example, the late Dr. Sturges[25]—have attributed to fright and mental strain a most important position, others with equal ability have opposed this view. The truth probably lies in the middle course. Many of the examples attributed to fright have, no doubt, only proved that the condition of the brain must have been very unstable, and the essential point has been, not the trivial cause of fright, but this condition of instability. It is well known that rheumatic children are often highly nervous and excitable, and especially so before an attack of chorea; this fact has been insisted upon by, among others, Dr. Goodhart, Dr. Cheadle, and Sir Dyce Duckworth, and quite recently by Dr. Still. How much of this instability in any case of chorea is to be attributed to hereditary weakness and how much to latent rheumatic processes it is difficult to decide. At present the pathological processes that result from fright are unknown, though on the clinical side it is recognised that their effects may be as far-reaching and of as long duration as morbid conditions produced by bacterial poisons. The association of fright and rheumatic chorea appears to stand at present thus. Rheumatism produces a cerebral state analogous to that produced by fright; what that condition is we do not know. When chorea arises in a rheumatic child and is attributed to fright it would seem probable that fright acts upon the rheumatic brain much as strain acts upon the rheumatic heart—namely, intensifies the rheumatic process in the brain and precipitates chorea, as does strain hasten the onset of rheumatic carditis. Such a brain previously to the fright is unstable from rheumatic infection and then the fright itself, lowering still more the cerebral resistance, starts sometimes at once, sometimes after a short interval, the actual phenomena of chorea.

III.—The Occurrence of the Diplococci in the Polymorphonuclear Leucocytes.

By centrifugalising the pericardial exudate from a case of acute rheumatic pericarditis we have succeeded in demonstrating the presence of these organisms in the polymorphonuclear leucocytes. In one instance there were as many as three pairs of diplococci in one leucocyte. In rabbits we have also demonstrated them in the same cells in the joint exudate. The fact that the diplococcus can be discovered in the polymorphonuclear leucocytes is of interest because it is well known that there is a moderate leucocytosis in rheumatic fever. It is therefore possible that this leucocytosis is protective in function.

IV.—The Incubation Period of Rheumatic Fever.

It does not seem very probable from our observations that rheumatic fever has a definite incubation period. If it should so happen that a very considerable infection suddenly occurred, then the symptoms show themselves rapidly. Dr. A. E. Garrod in his treatise gives several examples in which the local symptoms showed themselves on the second day or within the first week, and in these instances there was a very definite history of chill and cold. Rabbits intravenously inoculated usually show the first local lesions at the end of the second or the beginning of the third day. On the other hand, the resistance to the disease being great, it may well be in other instances that for some considerable time the infection is kept at bay and general indeterminate symptoms alone be manifested. Then one of two events may occur: either the resistance may prove effectual and the illness come to an end without having ever been recognised as rheumatic fever, or the infection may conquer and rheumatic fever result after a considerable period of previous ill-health. This occurrence of rheumatic fever after some weeks of previous malaise is thoroughly recognised by clinicians.

In the consideration of this question a study of the tonsils after death is of some interest. These are not uncommonly enlarged and very unhealthy at the time of death, and when sections are made through them scattered foci of inflammatory exudation may be discovered at some distance from the surface (a point insisted upon by Dr. William Hillier), the structure of the tonsil itself is indurated and points to a condition of subacute inflammation and disease of long standing. In such a condition as this we naturally wonder how great possibilities for harm exist in these scattered foci of active disease, to what extent the organisms may develop at these sites, and to what extent they may gain access to the system. The importance of this question has been still more accentuated by the extensive researches of Fritz Meyer, conducted in the laboratory of Professor von Leyden, and published in February, 1901. Meyer, after

[24] Transactions of the Pathological Society, October, 1900.
[25] THE LANCET, Sept. 29th, 1888, p. 605.

an investigation extending over two years, succeeded in repeatedly isolating from the throat in rheumatic patients a diplococcus easily decolourised by Gram's method. This grew well on blood agar in staphylococcal masses, and in liquid media of high alkalescence in streptococcal chains, and produced in rabbits the same phenomena as did the diplococcus isolated by ourselves.

V.—Is Fever a Primary Phenomenon in Rheumatic Fever or is it Secondary to the Local Lesions only?

Upon this point we are able to bring forward some facts which suggest that fever may be a primary phenomenon of the disease. This view has been held by such authorities as Graves, Todd, Fuller, and others, while, on the other hand, Besnier and Homolle considered the fever to be secondary to the local lesions. In the valuable monograph by Dr. A. E. Garrod upon rheumatism the evidence for and against these views and the difficulty there is in arriving at a solution of this question are stated with great clearness. As Dr. Garrod has written, "It is only from the presence of the local manifestations that it is possible to be sure of the nature of the attack." Experiment overcomes this difficulty in some measure, but not at present altogether, for we do not understand exactly the method of infection in rheumatic fever. Granting, for example, that the throat is an important site of infection, we cannot say precisely under what conditions the diplococci gain access to the system, though it is probable that the path is through the lymph channels.

The experimental method of intravenous inoculation, on the other hand, is a gross method, for one considerable dose of the organisms is at once injected into the circulatory system and all resistance at the site of inoculation put out of court. Admitting this, it is clear that we can by this means state precisely when infection took place, and therefore can judge whether fever is a primary phenomenon or not under those conditions. We have found the temperature rise within 24 hours, whereas the local lesions usually do not appear until the third day. In one case pericardial fluid from a case of rheumatic pericarditis was removed in sterilised pipettes four hours after death, and then incubated for 24 hours. The fluid contained the diplococci in great numbers. This was intravenously inoculated and four hours afterwards the temperature had risen to 105°. This was a more pronounced rise of temperature than occurred when cultures upon blood agar were used. This result suggests that toxins in the pericardial fluid might have assisted in causing this rapid rise of temperature.

VI.—The Experimental Production of Morbus Cordis.

Whatever views may be held by others regarding the relation of this organism to rheumatic fever there can be no possible doubt that they are capable of producing cardiac lesions with great constancy. We have repeatedly observed the occurrence. The mitral, tricuspid, and aortic valves have all been affected, and, in addition, dilatation of the heart with fatty change in the myocardium and pericarditis have resulted. These results are extremely suggestive of the true meaning of the infection. It seems highly probable, too, that the study of heart disease may be simplified and be made more certain by observations upon the conditions experimentally produced. There is one aspect of this subject which has a very important bearing upon the study of rheumatism, and that is the involvement of the right side of the heart. It is repeatedly stated that the right side of the heart is but rarely affected in rheumatic fever, and so frequently is this statement made that we believe it may lead to error. Sir Thomas Barlow, among others, has, to our knowledge, frequently pointed out that several valves are usually injured in the severe rheumatic carditis of childhood, and in such cases we believe, with others, that it is comparatively common for the tricuspid valve to be affected. The lesions are less severe, no doubt, often indeed very slight, but they are frequently present. Again, when it is remembered that the tendency of these lesions in rheumatism is toward recovery, it may well be that a thickening of the tricuspid segments, really of previous rheumatic origin, may be ascribed entirely, rather than in part, to mechanical overstrain the result of some advanced lesion upon the left side. The question, as it presents itself in rheumatic fever, is one of degree, and to argue that an affection of the right side of the heart, even if severe, *cannot* be rheumatic but is due to a secondary infection is, we believe, to assume more than can be granted. When the extremely delicate valves of the rabbit's heart are affected, the granulations are minute and the distinction between the affection of the valves on the right and on the left side less evident. The aortic segment of the mitral is, however, as in man, a less delicate structure, and it is in that segment that we have noted in addition to granulations some thickening and opacity. It is quite possible that by the experimental method the solution of certain difficulties will be obtained, for just as in man the mitral valve or the aortic may be apparently alone affected, so in rabbits we have observed the same occurrence; yet even in those cases in which only one valve apparently is affected it is quite possible that more than one was infected but that these others have by virtue of the phagocytic action of their connective tissue-cells destroyed the invading organisms which attacked them in comparatively small numbers.

At the risk of repetition we would once more state that injury to the tricuspid valve in the severe rheumatic carditis of childhood, though slight in extent, is frequent in its occurrence, and the more carefully it is looked for the more frequently it will be found to occur. That if rheumatic fever is a disease due to an infection there is danger in the assumption that disease of the tricuspid valve is necessarily due to a secondary infection. That such may be the case is certain, but how often it is the case yet remains to be proved. Again, when a patient who has been the victim of repeated rheumatic attacks dies from malignant endocarditis it is quite as legitimate to assume that the condition is truly rheumatic though altered in type as it is to assume the occurrence of some secondary infection. If the organisms are isolated and demonstrated as specific yet not rheumatic then the position is certain, but to judge by the size of granulations, by the rupture of chordæ tendineæ, by the spread of the vegetations on to the surface of the auricle, or by the marked affection of the tricuspid valve, is, we believe, dangerous and liable to result in an attempt to bind with an iron band a disease which is perhaps of all diseases one of the most variable. This fact we can state, that we have succeeded in isolating a diplococcus from cases of endocarditis in which rheumatism appeared to be the only cause, and have reproduced even to the very identical valves malignant endocarditis and then later a condition indistinguishable, as far as the arthritis and endocarditis are concerned, from the condition produced by the diplococcus of simple rheumatism.

The occurrence of ante-mortem thrombosis in the heart in rheumatic fever.—The causes of its occurrence are probably various—there are the mechanical difficulties associated with the valve deformities, there is the weakness of the heart wall, and the increased tendency of the blood to clot. In rabbits the stages of the process can be studied. In one case we noted rapid, feeble, distant heart sounds and the development of a systolic murmur, audible at the lower angle of the right scapula. We were puzzled by the murmur, and suspected, from the condition of the heart, pericarditis. The necropsy showed no gross valvular disease, but a large ante-mortem clot in the right auricle. It is clear that in this case one factor in the causation of ante-mortem thrombosis could be excluded—namely, the mechanical one due to advanced valvular disease. The next case in which we noted the feeble, distant heart sounds we did not wait, but after assuring ourselves that it was not a passing phenomenon the animal was killed and the heart examined. Our conjecture proved correct; ante-mortem thrombosis had commenced in the left ventricle in the neighbourhood of the valve ring beneath the mitral cusps and at the apex of the left ventricle. There was no gross valvular lesion. Finally, as in rheumatism, a mitral systolic murmur may appear early in the illness and then rapidly disappear. So in rabbits we have observed the phenomenon and have ascribed it to the same cause—namely, to an acute dilatation of the ventricle rather than to an organic affection of the mitral valve.

Diphtheria in Shirehampton.—At the meeting of the Barton Regis (Bristol) Board of Guardians held on April 26th, Dr. E. Crossman, medical officer of health, reported that 25 cases of diphtheria had occurred at Shirehampton during the past two weeks, and he urged the need of further hospital accommodation for infectious disease. The council eventually resolved to build a temporary hospital with 16 beds at a cost of about £550.

A CASE OF PERFORATING GASTRIC ULCER WITH RIGORS.

OPERATION FOR SUTURE FOLLOWED THREE WEEKS LATER BY VOLVULUS AND ACUTE INTESTINAL OBSTRUCTION REQUIRING A SECOND LAPAROTOMY.

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THE patient, a female, aged 27 years, was seen for the first time on Nov. 10th, 1899, three days before perforation took place. She was then suffering from slight dyspeptic symptoms, without anæmia or marked constipation, and gastric ulceration was not suspected. For two years, however, she had had gastric troubles of varying severity and had once suffered from anæmia. On Nov. 13th at 6 P.M. she had a sudden attack of pain in the left side with vomiting. She rallied from this and when seen on the 14th was fairly comfortable, but had vomited again. During the whole of this day she did not lose ground, and she took a fair amount of hot water and milk diluted with thin barley water. She had a good night. On the 15th she was not so well. She had a rigor at 9.20 A.M. The abdomen was tender and tympanitic. Another rigor came on at 12.37 P.M. There was no action of the bowels. Mr. Bowlby saw her at 6 P.M., and then, 48 hours after the commencement of acute symptoms, the abdomen was opened by a median incision above the umbilicus. A perforating gastric ulcer was found on the anterior wall and near to the cardiac end of the greater curvature. This was closed with six sutures without difficulty. The ulcer was about a quarter of an inch in diameter, round, with clean-cut edges as if punched out, without any inflammation or inflammatory thickening. The stomach contained about an ounce of mucus, but the abdomen, though distended, did not contain much fluid or solid matter, the latter being chiefly flakes of coagulated milk. The spaces behind the liver and Douglas's pouch were carefully sponged out, but the abdomen was not irrigated. A glass tube used to drain the gastro-hepatic region was kept in until the third day after operation. The patient recovered well from the operation and progressed very fairly for three weeks, though the temperature was never quite satisfactory except for a few days at a time. On Dec. 4th, three weeks after the operation, there occurred a sudden attack of very severe abdominal pain with vomiting and collapse. The patient complained of pain in the lower part of the abdomen with some tenderness, and though the pulse was good she looked and felt very ill. The abdomen was distended, especially below the umbilicus, and tympanitic. The liver dulness was almost entirely absent and there was nausea but no vomiting. The pulse-rate was 88 and the temperature was 100° F. Per rectum nothing was felt. From this time till 10.30 P.M. the pain gradually increased and the patient became more and more restless. The distension increased and the pulse became more irregular and more feeble, but it was never above 100. At this time the patient was again seen by Mr. Bowlby and it was decided to operate at once.

The operation was performed at 10.30 P.M. by a long incision below the umbilicus. The peritoneal cavity contained about a quart of darkly blood-stained fluid and in the lower part of it could be seen a mass of greatly distended and discoloured intestine. This was firmly fixed down in the pelvis where it seemed to be quite impacted. With some difficulty it was turned out of the peritoneal cavity in a mass, and it was then found that the greater part of the small intestine had been adherent at the bottom of Douglas's pouch and had become completely twisted from left to right so as to form a large volvulus. The adhesions were divided and the mass of distended bowel was untwisted, but was found to be so much distended that two small incisions had to be made with a tenotomy knife to let out gas and fluid before the intestines could be returned into the abdomen. The wounds were closed with Lembert's sutures and the intestines were sponged and returned to the peritoneal cavity. The abdominal wall was sutured in layers and closed. Progress was subsequently uninterrupted and after careful feeding for three weeks the patient made a satisfactory recovery.

The case is interesting from several points of view, not least on account of the extraordinary vitality and recuperative power of the patient who survived two days of peritonitis following perforation and the necessary operation for suture as well as the strangulation of an immense quantity of small intestine and a very serious operation for its relief within three weeks of the first abdominal section. The conditions found at the second operation are fortunately rare and the adhesion of the intestine was evidently the result of inflammation of the pelvic peritoneum, the volvulus occurring secondarily to the adhesion and being the result of the attempts of the bowel to escape from the band, whilst the band itself by forming a fixed point enabled the twist to occur. As in all such cases the incisions into the bowel were of great service in permitting the replacement of the distended gut and in helping it to recover subsequently.

The symptoms before the first operation were also very unusual and misleading. It is certainly very rare for rigors to occur after perforation of a gastric ulcer, but in this case they were very severe and were accompanied by great pyrexia, the temperature at one time reaching 106°, while the pulse never became really rapid.

At the time of the occurrence of the volvulus, also, the pulse remained below 100, in spite of the strangulation of a large mass of intestine, and although the patient was evidently much collapsed and in intense pain. It is seldom that so serious a condition as was found in this case on opening the abdomen causes so little disturbance of the pulse-rate, but this case, and others which we have seen, should serve as a warning not to place too much reliance on a quiet pulse where the question of laparotomy is under consideration for the relief of such suspected conditions as perforated gastric ulcer and volvulus.

ON SEROUS VACCINIA IN CONNEXION WITH CRETINISM AND RICKETS.

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THE serous character occasionally manifested by vaccine lymph is generally recognised to be of constitutional origin in the majority of cases, but, so far as I am aware, its connexion with cachectic states which may develop subsequently has not received much attention, whence there is reason to hope that the following cases may prove of interest.

CASE 1. *Serous vaccinia; myxœdema at the age of 34 years.*—This patient, an unmarried female, 40 years of age, the sister of a congenital cretin whose case was reported in 1884,[1] became herself myxœdematous at the age of 34 years. Shortly before or during the early stages of myxœdema she displayed great susceptibility to the action of primula obconica on the skin and experienced several attacks of dermatitis attended with an eruption of bullæ, which yielded a copious flow of thin watery serum, from the mere handling of this plant.[2] Her mother states that as an infant she had been extremely liable to become blue on exposure to cold, this being a feature common to most of the cases which follow. Of her vaccination it may suffice to state that lymph was taken from the arm on the eighth day and that it continued to flow freely from it afterwards during the whole afternoon, while both the first and second scabs which formed emitted serum copiously. On the day after the opening of the vesicle (one large insertion had been made) increased redness and swelling supervened, and the former extended from the back of the hand to the left ear, this condition lasting for 10 or 12 days, during which the child was extremely irritable, although her health was not injuriously affected afterwards. It is of interest to add, as showing that there were no germs other than those of vaccine in the lymph, that a neighbour vaccinated her own baby from it after the medical man had

[1] THE LANCET, August 23rd, 1884, p. 314.
[2] THE LANCET, March 4th, 1899, p. 579.

left and a perfect vesicle resulted which gave no trouble. I may here mention that in the brother of this patient, the congenital cretin already noticed, the vaccine lymph did not manifest the serous character and the same is to be said of another congenital case (a remarkable combination of cretinism and rickets) which I have had under observation. I refrain from commenting on this negative fact in the present article.

CASE 2. *Serous vaccinia; subsequent cretinism or juvenile myxœdema.*—In this case there can be little doubt that the sequelæ of vaccination led to acquired cretinism, although probably in a predisposed subject, this, I believe, being the first case of the kind recorded. The patient, a young man in his twenty-second year, first came under observation more than a year ago when his height was 4 feet ½ inch and his weight was 5 stones. Of his family history I may only mention that his mother, who died at the age of 47 years, was perhaps myxœdematous, as she was for some years very stout and supposed to be dropsical and is said to have had "a skin like wax and cheeks like roses." The patient's case, when he first came under notice, was a good illustration of what French writers have called *la forme fruste du myxœdème atrophique*[3] and was remarkable for certain negative features; for instance, there was no slowness or other defect of speech, so that when I first showed the patient to the Medico Chirurgical Society of Glasgow (on March 17th, 1899) the diagnosis of cretinism was generally doubted, and several members expressed themselves strongly against it.[4] Thyroid treatment was commenced on May 13th,

FIG. 1.

Before treatment.

1899, and when the patient was again brought before the Society (on Feb. 2nd, 1900) his height was 4 feet 5¼ inches. At this meeting the President (Dr. G. S. Middleton), and Dr. A. G. Faulds suggested that it would be of interest to see the developmental state of the osseous system in the case, and to the latter, who has done some good work with the x rays at the Glasgow Royal Infirmary, I am indebted for a skiagram of the hand and forearm with regard to which he observes in a note that "the bones are in a state of incomplete ossification with non-union of diaphyses and epiphyses similar to the condition seen in a child 11 years of age." This is analogous to what has been observed by Hofmeister and von Eiselberg in the experimental myxœdema of newly-born animals to which the president referred at this meeting.[5] Fig. 1 and Fig. 2 represent the patient as he appeared (Fig. 1) before treatment and again (Fig. 2) after he had grown to the height of 4 feet 6½ inches (in May last). In these the relative difference in height is closely preserved. At the date of writing (November, 1900) his height is 4 feet 8½ inches, so that it will be observed that he has not been growing so rapidly of late.

FIG. 2.

After treatment.

At neither of the above meetings did I refer to this patient's vaccination, this being a subject which I reserved for further observation. The following is a brief account of it derived from statements made by his eldest brother and other relatives. His mother took him to a public institution in this city for the purpose and she afterwards described the operators as being very careful, remarking that they examined behind the ears, the buttocks, &c. She also saw the vaccinifer, from whose arm a number of other infants were vaccinated at the same time, and confessed that it was a fine healthy child, with a beautiful "pock." Six insertions were made and all "took" and from all the six vesicles resulting lymph was taken on the return day. Lymph continued to flow freely from the arm after the mother left the dispensary, and next day redness and swelling supervened and extended by-and-by to the knuckles and the top of the shoulder, and this condition is said to have lasted for two or three weeks. The vesicles meanwhile continued to discharge serum, while the subsequent scabs are said to have done so for several months altogether. Strange as it may seem, the mother did not take the child back to the dispensary and did not call in a medical man till some weeks had elapsed, when the case proved refractory, for the arm was not completely healed for 18 months. From the time of his vaccination the child grew always very slowly, and the height which he finally reached when first seen, at the age of 21 years (4 feet ½ inch), was all completed before he was 10 years old. The unfortunate result in the case was

[3] Grancher: Traité des Maladies de l'Enfance, tome iii., pp. 910 and 916.

[4] Proceedings of the Medico-Chirurgical Society of Glasgow, vol. ii., p. 319.

[5] Centralblatt für Anatomie und Pathologie, 1893, p. 353.

evidently due to gross neglect and mismanagement, but I am here only concerned with the serous character of the vaccinia in its early stages, and as bearing on the constitutional origin of this feature the cases in the following family seem to be of special significance.

CASE 3. *Serous vaccinia in six members of a rickety family of seven children; cretinism in one child.*—The parents in this case were both alive in September last, when the mother died from aneurysm of the aorta and profound anæmia at the age of 66 years. The father is 71 years of age and of the children only three survive, of whom the cretin is one. He is the youngest of the seven and was a healthy child until the age of two years and four months when he was suddenly seized with croup of so violent a type that on the first day of the attack he was apparently suffocating, with crowing inspiration, &c. The medical attendant ordered leeching followed by poulticing; five leeches were applied and the poultices drew a large quantity of blood, leaving the patient ghastly pale. The dyspnœa was instantly relieved and it never returned, and although for a few days the child seemed to be dying he gradually recovered, but only to lapse at once into his present condition of complete cretinism. He is now 26 years of age, is bandy-legged, 3 feet 2 inches in height, and 3½ stones in weight. He has an extremely thin and delicate skin, showing the veins clearly in many places, although rough and scaly in others, a scrofuloderm (besides pseudo-lipomata) in the neck, and two cicatrices over one knee-joint, the remains of a chronic abscess from which he had suffered for many months. The mother had also a similar abscess at one time about the knee, and the entire family betrayed evidence of a marked proclivity to scrofula and (the children at all events) to rickets. On inquiry I ascertained from the mother that vaccinia had manifested the serous character in every member of this family but one, the eldest son, who was not rickety, is still surviving at the age of 36 years, but is now probably phthisical. In all the rest the sites of vaccination had discharged serum for several weeks, although in four of these the vesicles were not opened by the operator but ruptured spontaneously, and this in spite of the fact that one had only one, and another two small vesicles, and that the mother took every precaution to avoid this mishap. This spontaneous rupture happened in the case of the cretin and the only other survivor (also a son); this latter, about 34 years of age, is a pronounced example of rickets and is barely five feet in height, with a disproportionately large head; he did not cut his first tooth till the age of 18 months and could not walk till his seventh or eighth year. In the case of one child, a girl who died at the age of 18 months, the vaccinated arm, after rupturing spontaneously and discharging thin serum for a week or more, became affected by some inflammatory condition, apparently a form of lymphangitis, which extended to the corresponding side of the trunk and, as the mother believes, so undermined the child's health that she never fully recovered from the effects. She describes her as having had blue veins and a delicate skin, and as being very apt to turn blue with cold. She even attributed injurious results to vaccination in other instances, and there seems to be no doubt that vaccinia of this character may readily become the parent of other evils if not promptly and judiciously treated. It is surprising that this form of the affection is not mentioned in some recent works on vaccination or in the final report of the late English Royal Commission.

CASE 4. *Serous vaccinia with symptoms probably indicative of a myxœdematous tendency; spasmodic asthma at the age of six years.*—This patient, a boy aged seven years, was recently brought to me by his mother, an intelligent woman, who reported that of late he was easily tired and did not care to exert himself and frequently complained of sore legs, especially on walking up-hill. She had already regarded him as "delicate" and she said that as a baby he had had a pink-and-white skin and that his face and hands got cold readily. At the age of five years he had an attack of whooping-cough, which clung to him for months, and within the last 12 months he had had frequent paroxysms of an asthmatic character, in one of which I had lately the opportunity of seeing him. Without inquiry on my part the mother adverted to the subject of his vaccination and she drew a picture of a type of serous vaccinia which every experienced vaccinator would at once recognise, so that I need not enter into details. I may add, as a fact not without significance, that I found this lad very easily blistered by a slight application of iodine liniment.

I can here only glance at some conjectures and opinions which I have been led to entertain with regard to the questions suggested by this subject. The records of cretinism (or myxœdema) and facts observed in my own cases have strongly impressed me with the view that constitutional factors play a predominant rôle in the causation of this cachexia, and it would appear that we might sometimes recognise the predisposition to it in infancy by the physical signs and symptoms manifested in some of the above cases, and these, it will be observed, are the same as were formerly assigned to a certain category of the scrofulous. An important fact in favour of this view of the etiology of the disease is the occasional occurrence of more than one case in the same family. The inherited constitutional vice seems to be a common source of various other forms of degeneration and disease, depending probably on the incidence of different exciting causes; thus, besides serous vaccinia, I have encountered in myxœdematous subjects and other members of the families to which they belong instances of blindness, deafness, mouth-breathing from nasal obstruction, tuberculosis, and rickets, besides such neuroses as spasmodic croup and spasmodic asthma (a notable example of the latter being a brother of the patient in Case 1). Passing over other problems I would here limit attention to the question: Is the thyroid specially concerned in the production of serous vaccinia and serous types of other affections? Briefly I would answer that the evidence seems to show that such is the case in many instances, although it would be hard to speculate on other factors which may sometimes coöperate. It would appear, further, that the condition of the gland in such cases is one in which it is prone to atrophy from exciting causes which would otherwise prove inefficient. The identity of the effect, so far as serous exudation is concerned, produced in Case 1 by vaccination and by the action of primula obconica and the subsequent development of myxœdema in the case seem to be facts of much significance. It would appear that we ought to recognise the existence of a serous as emphatically as we do that of a hæmorrhagic diathesis, and it is probable that the two are intimately related to each other, while it is evident that both are associated with great vulnerability of tissue by various morbific agents. Thyroid treatment has proved of value in hæmophilia and some of the other affections which have been here clinically grouped together, and quite recently I had a case of nasal hydrorrhœa of three years' duration in a girl, aged 12 years, which was promptly arrested by it. This is conclusive evidence if corroborated by further experience.

It has been concluded from experiments by Schiff and Horsley that the thyroid has an antitoxic action on certain toxic substances resulting from the digestion of albuminous bodies, and I would further ask, Is it possibly concerned also in defending the organism against the germs of some zymotic diseases? If the healthy gland is necessary to produce the viscid lymph of normal vaccinia it is readily conceivable that it may perform an office of this defensive kind, whether it has any toxin-destroying power or not. For lymph of a certain degree of viscidity may act as a bulwark of defence, limiting, perhaps, the multiplication of organisms and the amount of toxins produced and absorbed, whereas when it is of the serous character opposite results may ensue. I venture to submit, not without hesitation, a suggestion on this subject. It is that vaccination and perhaps experiments on vesication should be performed on calves and a few other animals after extirpation of the thyroid. It seems probable that the greater viscidity of calf lymph as compared with human lymph may be due to greater energy of the thyroidal function, this being probably necessary to maintain the higher temperature and more rapid growth of the calf. When we further reflect on the profound changes effected in experimental cachexia strumipriva, the diminished coagulability of the blood, and the leucocytosis and anæmia, as described by Halliburton and Horsley,[a] it is not unreasonable to suppose that some modification in the course of vaccinia or in the character of the lymph produced might be observed. And, if any such should be found to occur, experiments on variolation might be once more tried in the same condition of the bovine animal.

Glasgow.

[a] Report of the Committee on Myxœdema.

THREE CASES OF SARCOMA OF THE UTERUS.

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PRIMARY sarcoma of the uterus is undoubtedly a very uncommon disease, but in all probability its rarity is considerably over-estimated. Such a large number of cases of malignant disease of the uterus come under observation only when the disease is so far advanced that anything more than palliative treatment is impossible and therefore a careful pathological examination of the nature of the growth is not made and it is possible that many of these cases may have been of sarcomatous rather than of carcinomatous malignancy.

Mr. Roger Williams in his recent book[1] states that his analysis of 2649 consecutive cases of primary uterine neoplasms comprises only two examples of sarcoma to 1571 cancers. He does not state whether these were all confirmed pathologically, but I presume that they were. Recently, however, interest has been aroused in this disease and cases are being recorded more frequently. The following cases are therefore, I think, worthy of reporting, especially as they exemplify three very distinct varieties of the disease both in their clinical and pathological features.

CASE 1.—The patient was a married woman, aged 39 years, who had had one child and who had had no abortions. Menstruation, which commenced at the age of 14 years, was regular, copious, and not very painful. The patient was married in 1893. About six months after her marriage the menstrual flow increased and she was operated upon for something which was said to have protruded from the vulva when she strained. In 1895, the menorrhagia having returned, she came under my care at the Hospital for Women and Children at Leeds and I found and removed several polypi from the cervix and the uterine cavity which was scraped. These growths had all the appearances of ordinary mucous polypi. The condition of the patient so far improved that a few months afterwards pregnancy occurred and her only child was born after a normal labour at the end of 1896. About six months after confinement and on two subsequent occasions some polypoid growths were treated by various surgeons, on the last occasion the operation being stated to have been radical. On May 13th, 1899, the patient returned to the hospital for urgent bleeding and severe anæmia. The uterus was found to be enlarged and a polypoid mass of growth of about the size of a fist occupied its cavity. This was scooped away and the cavity was cleansed and packed with gauze. It was then found that there was a further growth in the left wall of the uterus. Examination of the tissue which had been removed proved it to be undoubted sarcoma. When her general condition had improved ether was given with a view to radical operation if found possible. It was then found that in addition to the growth in the uterine wall a further large mass existed burrowing deeply between the layers of, and at the base of, the left broad ligament. It also extended upwards above the brim of the pelvis and was closely related to the bladder in front and the rectum behind. The disease was clearly irremoveable. The growth then slowly increased and occasional attacks of bleeding required treatment by packing. The patient's health steadily failed. Twelve months afterwards she was again in the hospital, the discharge, which had become foul, having produced septic symptoms. The growth was then found to have increased greatly. A large mass occupied the lower half of the abdomen, three rounded masses being especially prominent. One of these could be identified as the uterus enlarged with an intra-uterine mass. The sepsis was relieved, but the patient gradually became weaker and she died from exhaustion in September, 1900. A noticeable and fortunate circumstance in the case was an almost entire absence of pain throughout. There were no symptoms or signs indicating the presence of secondary growths in other organs.

The nature of the growth, which was examined on several occasions, proved to be an undoubted round-celled sarcomatous infiltration of the uterine tissue. There was no evidence of any structures in the specimens which might suggest the case to have been one of deciduoma malignum. The fact, however, that the polypi which were removed before the pregnancy were apparently innocent and that the malignancy of the disease asserted itself a few months after confinement is a point of great interest. If the exact nature of the growth had been ascertained on its recurrence after the confinement it is possible that a radical operation (hysterectomy) at that time might have saved the patient. The condition was only discovered when secondary growths rendered operation impossible.

CASE 2.—The patient, a widow, aged 66 years, was the mother of four children. Her last confinement had taken place at the age of 40 years. The menopause occurred naturally in her forty-sixth year. For seven or eight years there had been a slight, occasionally blood-stained, discharge from the vagina, but this discharge had become much increased during the last few months. She complained of very little pain until about six weeks before I saw her, but during that time the pain in the lower abdomen had been severe. There had been marked loss of flesh recently. On examination there were great pain and tenderness in the hypogastric region, so much so that thorough examination was impossible. Vaginal examination revealed a patulous cervix free from disease, an enlargement of the uterus, and an offensive blood-stained discharge issuing from its cavity. The patient was examined under ether. The uterus was then found to be generally enlarged, its fundus reaching two or three inches above the pubes, and there was evidently some peritoneal effusion and adhesion. The interior of the cavity of the uterus was found to be roughened and irregular with new growth which was specially abundant near the fundus. This part was necrotic and it easily broke down. Owing to the presence of the peritonitis and the general condition of the patient extirpation was impossible. The uterine cavity was cleansed as far as possible of foul tissue and was packed with iodoform gauze. Portions of the growth were preserved for examination. The patient did not improve and eventually she died from the peritonitis.

The growth consisted of a very vascular sarcoma consisting of bundles of spindle cells with many vessels and much blood. It is probably an example of the diffused sarcoma of the connective tissue of the uterine mucous membrane.

CASE 3.[2]—A married woman, aged 32 years, the mother of four children, was sent to me in June, 1898, by Dr. C. J. R. McLean of Yeadon for metrorrhagia following the expulsion of a vesicular mole. Menstruation, which commenced at the age of 14 years, was never regular, the flow appearing about every six or eight weeks and lasting for two or three days. It was then scanty and painless. The patient had married when she was 26 years of age, and having had four pregnancies in rapid succession and three of the infants having been suckled menstruation was practically absent during the whole of this period. The labours were all difficult. The second child was delivered stillborn with instruments. The fourth and last child was born two years before I saw her and she had never been well since, but always anæmic and weak. The child was suckled for 18 months, and soon afterwards menstruation returned two or three times and then followed a flooding. The uterus then rapidly enlarged, and the flooding recurring a vesicular mole was diagnosed and the uterus was cleared by Dr. McLean. The uterus shrank and the bleeding ceased, but a watery discharge continued, increased, and became offensive and occasionally bloody. When sent to me the patient was extremely anæmic and her temperature was 103° F. The os was patulous, the cervix was soft, and the uterus was enlarged, the sound passing three and a half inches, and freely moveable. Under ether the uterine cavity was explored. The finger detected a rugged friable mass attached to the upper and posterior part of the uterine wall. It gave the impression of a malignant growth. The free portions were carefully removed with a scoop and the cavity was irrigated and packed with iodoform gauze. The growth was preserved for examination. The septic condition subsided and the patient improved. The growth was examined independently by several pathologists who all agreed that it was sarcoma.

[1] Uterine Tumours, 1901.

[2] The specimen from this case was shown at a meeting of the Leeds and West Riding Medico-Chirurgical Society in October, 1898.

The report of the Clinical Research Association was to the effect that the tissue consisted of uterine muscle substance infiltrated with sarcoma. The cells were spindle-shaped and many of them were very large. The characters of the growth were not like those of deciduoma malignum. The uterus was consequently extirpated by vaginal hysterectomy and the patient made a good recovery. I examined the patient a few months ago—that is, just two years after the operation—and I found her to be free from disease and in good general health. I have recently heard that she continues well.

The uterus when removed showed no signs of growth externally. On opening its cavity by a vertical incision through the anterior wall the disease was seen to consist of a small, reddish, lobulated sessile growth situated on the upper and posterior part of the uterine wall and projecting towards its cavity. The other portions of the uterine wall presented no naked-eye evidence of disease. Further microscopical examination of sections direct from the growth after removal confirmed the previous diagnosis.

Leeds.

A CASE OF RECOVERY AFTER OPERATION FOR DIFFUSE PERITONITIS FROM PERFORATION OF THE APPENDIX

BY RUSSELL COOMBE, M.A., M.D. CANTAB., F.R.C.S. ENG.,
SURGEON TO THE EXETER DISPENSARY.

THE case which I have described below may prove of interest when read in conjunction with the case reported by Mr. Charles A. Morton.[1] The infection was obviously widespread, as in that case, but I acted in the operation on the belief that the upper part of the general cavity was free and that it was my business to leave it so. On the other hand, the pelvic part of the cavity was full of dirty fluid, which was most thoroughly sponged out and the cavity drained. The consecutive abscess in the left scrotum was doubtless due to a patent funicular process on that side.

On March 1st, 1901, I was asked by Dr. A. Macindoe of Sidmouth to see a patient a boy, aged 14 years. The past history of the patient was unimportant, there being a record of an occasional stomach-ache but nothing more. The boy was perfectly well on Feb. 25th. On the next morning he had some pain which he referred to the region of the appendix. He felt sick and had lost his appetite, but he sat up all day. He was first seen by Dr. Macindoe's locumtenent on the morning of the 27th. He had had some shivering during the night and had begun to be sick, with severe abdominal pain which had kept him awake all the night. The vomit was at first bilious, becoming darker afterwards. The bowels had acted. The abdomen was distended, more especially on the right side. The temperature was 104° F. Dr. Macindoe first saw him on the 28th. He was still very sick and the abdomen was much distended.

I visited him late in the afternoon of March 1st when the sickness had stopped, but the boy was obviously very ill. His temperature was 102°, his pulse was 132, and his respirations were 36. He had a hard, dry, red tongue with moist edges, and the respiration was chiefly thoracic. The lad lay on his side with his legs drawn up. The abdomen was generally swollen, but it was very markedly so in the neighbourhood of McBurney's point, there being already some redness and œdema in that situation. It was impossible to operate that night, but as early as possible on the next day (March 2nd) I opened the abdomen by an oblique incision reaching as far down as the deep epigastric vessels. On dividing the peritoneum at the upper part of the wound I at once came on an abscess extending upwards outside the ascending colon towards the liver. The pus, which had a strong fæcal odour, was carefully sponged out of this. The edge of the omentum, which lay on the inner side of the wound between the large bowel and the parietes, was not disturbed at the upper part, as there was a little glueing together of the peritoneal surfaces, but in the direction of the pelvis there was not the faintest attempt at any barrier and the fingers passed right down into the pelvis to the roof of the bladder, a large quantity of dirty brown-tinted blood welling up as the coils of intestine were separated. This fluid was sponged away as it welled up, and when this ceased the sponges were continually passed down into the pelvis until they returned dry. Two large drainage-tubes were then inserted, one going to the sub-hepatic pouch, the other down into the pelvis. The appendix itself was not seen.

The after-treatment was simple. Half a grain of calomel every hour for eight hours and a rectal tube did wonders in relieving the abdominal distension. A concretion of the size of a butter bean came away from the upper part of the wound on March 27th, the wound healing entirely a few days later. The only drawback during convalescence was that on the third day after the operation the scrotum became inflamed and an abscess slowly developed in the left tunica vaginalis. This was opened on March 13th and about three ounces of very foul pus escaped. The boy is, I hear, now about and well.

Exeter.

[1] THE LANCET, April 20th, 1901, p. 1134.

ON THE USES OF DIPHTHERIA ANTITOXIN.

BY T. B. BROADWAY, M.B., B.CH. GLASG.

AT a time when the antitoxin treatment of diphtheria is still in its infancy, when there are many who use it doubting its value—hence tardily and inefficaciously—and still a few who have no faith in its efficacy whatever, the putting in black and white of the successful cases that have occurred in the hands of those who have used the serum may help to its getting a fair trial and may be the means of not only saving the lives of patients, but of cutting short the attack and hence saving the patient from many of the sequelæ that follow. From October, 1896, to October, 1900, I have treated about 30 cases of this disease, the oldest patient being a child aged 13 years, and the youngest a child aged two years, and with the exception of half-a-dozen were treated with the antitoxin, the result being that of those treated with it only one of the number died, whereas of the six patients treated along the ordinary lines two died and two developed post-diphtheritic paralysis. The two latter unfortunately neither at the time nor at any time of the treatment showed a membrane, and I treated them for a simple angina of the throat, and it was not till the paralytic symptoms developed that it struck me that they had had diphtheria. These two cases were also the starting-point of an epidemic. In one case paralysis affected the limbs, whereas in the other case the thoracic muscles and the muscles of deglutition seemed to be especially affected; there was some loss of power in the arms, but the lower limbs seemed to escape altogether.

In the case treated with antitoxin that resulted in death the patient was seen by me first on the third day of illness. He was 11 years old and at the time when I saw him he had difficulty in breathing and in swallowing. On examining the throat I found a membrane, somewhat greyish in colour, covering the naso-pharynx, tonsils, and uvula with an offensive discharge from the nares and enlargement of the glands of the neck. After carefully washing the lumbar region with turpentine, rectified spirit of wine, and perchloride of mercury (1 in 1000) I injected 2000 units of the serum obtained from Burroughs and Wellcome and at the same time ordered inhalations of carbolic acid. On calling again I found the boy much easier in his breathing and his father told me that he had been able to swallow his milk more easily and, in fact, was constantly calling for some. On examining the throat I found the membrane greatly reduced. I then again injected 1500 units of the serum and after leaving injunctions that the boy was on no account to be allowed to sit up left with the full conviction that he would do well. Soon after my leaving he coughed up the membrane and slept soundly, but unfortunately on his father leaving the room he sat up and tried to help himself to some milk and fell back dead, death being due to cardiac failure. This was a lesson to me in giving a prognosis, and in all my other cases I took care to place the patient on a cardiac stimulant, the one generally used being a mixture containing two drachms of solution of perchloride of iron, one drachm

of solution of strychnia hydrochlorate, with glycerine and water to six ounces; one or two drachms every four hours. To this and also to the care which I took in explaining to the parents or nurse of the child the reasons for keeping the patient as still as possible I think I owe my success in serum treatment.

In aborting serious symptoms serum again holds the field. In the case mentioned it cut short the dyspnœa and allowed the patient to swallow with ease; in other cases, and especially in one, I noticed the great relief produced soon after the injection of the serum. In this case the child was two years old and had been ill for two days previously to my seeing her. When I arrived I found the child flushed in the face, tossing about with a short, constant, hacking cough; as she was only two years old I could elicit nothing from her, so I had to trust to my observations and the mother's statements. I found that the temperature registered 99·6° F. I tried to examine the throat, but could not manage it owing to the restlessness of the child, but found the glands at the angle of the jaws enlarged. The mother stated that the child could not "clunk" (swallow) her food with ease and also that she had two or three attacks of croup for which she gave her ipecacuanha wine, but without much benefit; she further stated that the child had had practically no sleep for the past two days. After carefully cleansing the part I injected in the gluteal region 1500 units of serum and waited to see its effects. In half an hour I found that the temperature had risen about a degree—that is, it registered 100·6°. I then left and called again in the evening, when the mother told me that the child was sleeping and that she had practically slept from the time I left in the morning; in fact, it made her a little nervous. I now found the child's temperature to be 99°, but as there still seemed to be some difficulty in swallowing I gave her another injection of 1500 units of serum and left. On the next morning I found that the patient had passed a fair night and had taken a good quantity of milk; her temperature, however, was 99·8°, so I gave her another injection of 1500 units of serum. I did not see the patient again till next morning, when her temperature was 98°, and as she also seemed to be fairly well otherwise I did not give her any more injections but put her on one drachm of compound solution of phosphate of iron every four hours. The patient did very well.

Space prevents me from giving a description of the other cases, but what I wish to impress on all is, first, that the serum treatment of diphtheria has placed the prognosis of this disease in a more favourable light and if used early practically saves life; secondly, it preserves the patient from the serious sequelæ that often follow recovery from it; thirdly, if proper antiseptic precautions are taken no abscesses form at the seat of injection; and lastly, the almost instantaneous relief which it gives to very distressing symptoms would alone justify its use, especially in a country practice where often medical help for a tracheotomy is hard to procure. Probably the injection of a saline solution at the same time as the antitoxin, as advocated in THE LANCET by Dr. E. E. Laslett,[1] would add to its efficacy.

In very young children I found the gluteal or interscapular region the best for injection; in older ones I often injected into the loose tissue of the breast, but when the child showed dread of the operation I injected into the gluteal region instead. The chief difficulty which I found in using the serum was the prejudice of the parents, and as, unfortunately, they usually belong to the illiterate and unthinking class it is hard to reason them into believing in the serum, though when they do allow its use and see the good which it does they are the very class to carry its praises far and wide.

In closing I would add that to procure good results from the serum it should be used early, freely, and in all doubtful cases of sore-throat for even if it is not diphtheria the serum will give rise to no bad results. To wait till the diagnosis is confirmed by bacteriological examination is throwing away precious time. A swab should be sent for examination, but at the same time the serum should be used. I may here add that I found it beneficial to give some simple mouth-wash or gargle such as boric acid, chlorate of potash, and glycerine, as it helped to keep the mouth, &c., fairly sweet. An inhalation of formic aldehyde, carbolic acid, or turpentine helped to check the spasmodic cough which is often so troublesome.

St. Dennis, Cornwall.

[1] THE LANCET, Oct. 20th, 1900, p. 1131.

THE RESPIRATORY MOVEMENTS OF THE PRÆCORDIAL AREA IN HEALTH AND IN DISEASE.

BY J. AIKMAN, M.D. GLASG.

FOR about two years I have given some attention to certain modifications of the chest movements during the respiratory act in the region known as the præcordial area. These modifications seem to indicate acute or chronic disease and also to forecast the advent of it. In the hope that my observations may offer a useful guide in practical work I venture to call some attention to their detail.

Normal.—Anyone who will carefully compare the third intercostal space on the left side with that on the right may convince himself that the left intercostal space rises and falls at its sternal end during the respiratory act to an appreciably less degree than the right. He will become cognisant that the area of limited movement is very small. It does not extend to the left beyond the junction of the cartilage to the rib. It does not usually extend upwards to the second intercostal space except in young children, but it does extend to the fourth intercostal space, and below that it is masked by the apex beat. I think that in children the cartilages of the ribs show lessened movement over the præcordial area, but the intercostal spaces show it more markedly. The comparatively still area is only discoverable in the normal chest when care has been taken to place the patient in a perfectly normal position. He should lie flat on his back in bed, his head should be straight, his shoulders and hips square, his legs straight, and his arms laid along his sides. In a twisted position the condition is not obvious. Lateral curvature of the spine masks it. So does rachitic deformity of the chest. This remark applies to all information which can be gathered from the respiratory movements.

In pericarditis.—While watching the respiratory movements during the course of acute rheumatism I have found that a marked diminution of the movement in the third left intercostal space precedes the stethoscopic signs of pericarditis by a period varying from one day to four days. In a much shorter period the limitation of movement extends to the second, and even to the first, intercostal space, and increases, less markedly, to the left. By this time both the costal cartilages and the intercostal spaces are involved, but there may be neither extension of the dull percussion note nor friction sound. I have never been disappointed in my expectation to find both at a later date. So far I have never waited more than four days but more often I have found conclusive evidence after one or two days. Continued observation of such cases has taught me that this limitation of chest movement disappears with recovery and reappears as a prognostic sign of relapse. Should these observations be verified by other hands they ought to have some bearing upon treatment.

In endocarditis.—The variations of chest movement which prognosticate and evidence endocarditis are less in degree. They are least marked when the right side of the heart is involved but I have been able to distinguish them. Their extension is less upwards and more outwards. The downward extension is attended by a displacement of the apex beat. I have also noted that the return of movement follows more slowly the diminution of stethoscopic signs and that some limitation remains as a record in cases where permanent damage is done.

The result of a careful examination of many cases of old-standing cardiac disease, with compensatory hypertrophy or dilatation, convinces me that the præcordial stillness is wider than normal. The explanation may be identical with that of normal stillness—the indication may be the physiological record of a pathological fact. I have recently noted the same phenomenon previously to death from ante-mortem clotting.

These observations have been checked by some of my professional friends—Dr. A. S. Dick (now of Glasgow) and Dr. R. Scott Frew who is working with me at present.

When Dr. W. J. Collinson was appointed house physician to the Royal Berks Hospital, Reading, I put the subject before him and asked him to observe. I quote his cases

rather than my own, as they give the records of an independent observer. He writes under date Feb. 26th, 1901:—

Only five cases of rheumatism came into hospital free from cardiac trouble. Of these five, three developed cardiac symptoms, and in each of them the sign of which you told me was well marked.

No. 1, Mrs. ——, admitted Oct. 20th, 1900. Heart normal; expansion of chest normal. Oct. 21st: deficient expansion on left side. Oct. 24th: systolic murmur heard in mitral and pulmonary areas. Subsequently disappeared.

No. 2, —— ——, aged 18 years, admitted Nov. 26th, 1900. Heart sounds and chest expansion normal. Nov. 29th: deficient expansion on left side of chest. Nov. 30th: systolic murmur in pulmonary area. Jan. 15th, 1901: systolic murmur in pulmonary and mitral areas.

No. 3, —— ——, aged 19 years, admitted Jan. 28th, 1901: heart sounds and chest expansion normal. Jan. 31st: deficient expansion of left chest. Feb. 2nd: heart sounds faint, no murmur (myocarditis). Feb. 5th: well-marked pericardial friction. This patient died and pericarditis, endocarditis, and myocarditis were found post mortem.

It seems to me incredible that this sign should not have been previously recorded, but I know of no such record. I advance it for the consideration of the profession in the belief that it will prove true and useful.

Guernsey.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON THE RESULTS OBTAINED BY THE ANTI-TYPHOID INOCULATIONS IN EGYPT AND CYPRUS DURING THE YEAR 1900.

BY A. E. WRIGHT, M.D. DUB.,
PROFESSOR OF PATHOLOGY, ARMY MEDICAL SCHOOL, NETLEY.

I AM indebted to the kindness of Colonel W. J. Fawcett, R.A.M.C., Principal Medical Officer in Egypt, for the following statistics dealing with the incidence of enteric fever and the mortality from the disease for the year 1900 in the inoculated and uninoculated among the British troops in Egypt and Cyprus.

—	Average annual strength.	Number of cases of enteric fever.	Number of deaths from enteric fever.	Percentage of cases calculated on average annual strength.	Percentage of deaths calculated on the same basis.
Uninoculated ...	2969	66	10	2·5	0·4
Inoculated... ...	720	1	1	0·14	0·14

These figures testify to a nineteen-fold reduction in the number of attacks of enteric fever and to a threefold reduction in the number of deaths from that disease among the inoculated.

In a note appended to the statistical table printed above Colonel Fawcett observes that the measure of protection resulting from the inoculation is not fully disclosed by a comparison of the figures of cases and deaths given in the table. Owing to the circumstance that soldiers inoculated in previous years are in the statistics included among the uninoculated, the number of the uninoculated was in reality less, and the number of the inoculated was in reality greater, than the figures set down for these groups in the first column of the above table. The figures in the second and third columns, on the other hand, accurately represent the number of cases and deaths in the inoculated and uninoculated, inasmuch as none of those inoculated in previous years contracted enteric fever.

A further point adverted to by Colonel Fawcett is that the only case which occurred among the inoculated occurred in the case of a patient admitted to hospital on the thirty-third day after inoculation. It would seem that the disease was in this case contracted before anything in the nature of protection had been established by the inoculation.

Netley

PRIMARY LARYNGEAL DIPHTHERIA.

BY E. M. SPENCER, L.R.C.P. & S. EDIN., M.D. TORONTO.

THE case of suspected laryngeal diphtheria published in THE LANCET of April 6th, p. 1009, by Mr. A. De Winter Baker induces me to send a short note of a very similar case, but one in which laryngoscopy was available leading to a positive diagnosis. On March 17th, 1901, I was called in to see a boy, aged 14 years, who was said to have a "cold." I found the patient dressed and, with the exception of slight hoarseness, seemingly not very unwell, with a pulse of 104 and of good volume, and complaining merely of slight sore-throat. A careful survey of the pharynx revealed nothing but a little hyperæmia of the fauces, and I made a diagnosis of slight laryngitis and expected the patient to mend soon. On the following day, however, I received a message that the boy seemed very "bad in his throat," and on my second visit he was suffering from constant slight dyspnœa with occasional exacerbations of urgent distress, accompanied by great excitement and cyanosis. There was now complete aphonia. Inspection of the pharynx revealed nothing but the slight redness noticed before. There was marked stridor on auscultating the trachea which became very loud on the accession of an attack of "suffocation" which was doubtless partly spasmodic. I inquired as to the possibility of lodgment of a foreign body, but this was negatived. Seeing that the case was urgent and rapidly growing worse I had the patient removed to my house for purposes of examination. Laryngoscopy revealed firstly great redness and swelling of the arytenoids, and then a larynx and a trachea literally full of typical diphtheritic membrane, the trachea being reduced, as far as I could judge, to about one-third of its normal diameter. The boy returned home and I followed immediately and injected 2000 units of anti-diphtheritic serum. The patient has made a steady recovery and is now practically well. At no time was a trace of membrane visible to ordinary examination. The aphonia was complete for a week, but the voice has now regained considerable volume.

Modbury, Devon.

FOREIGN BODY IN THE EAR.

BY L. K. HENCHEL, M.D. VIENNA.

THE following short account of a case in which a foreign body was impacted in the ear may, I think, be of interest.

The patient was a girl who, when five years old, had a bead of a rosary put into her ear in sport by a playfellow. This fact was kept secret from her parents and teachers (nuns) for two and a half years. After that time the ear was so troublesome that the child was taken to a specialist and then the story came out. The second time this specialist syringed the ear a white bead was found in the basin, but the girl remarked that the rosary from which the bead had become detached was a black one. No attention was paid to this remark at the time. For two and a half years the child suffered more or less from irritation in, discharges from, and pains in, the ear with loss of hearing. The case came to me on Feb. 15th, 1901, with a well-developed furunculosis. As the swelling in the meatus subsided under treatment I saw a black object partially obscuring the membrana tympani, and on syringing with moderate force a shell of japan lacquer came out. The meatus was very much reddened where the foreign body had lain so long—namely, for five years. When the little patient came to me the next day she had a rather severe hæmorrhage from her ear. I could plainly see blood oozing out from the reddened surface. I moistened some pure cotton with liquor ferri sesquichloridi, twisted it firmly over a fine boxwood stick, such as is commonly used on the continent for a toothpick, and under the guidance of the light applied it to the bleeding surface. The further history of the case was quite uneventful. The blood-clot formed by the styptic came away in two portions several days afterwards and the girl, who had been unable to hear a watch quite close to the affected ear, can now hear it as well as with the other ear, and a tuning fork is heard better now with the affected ear than with the other one. Neither the rosary nor the white bead is now to be found, a thing not to be wondered at after a lapse of several years.

Villa Carlotta, Bordighera.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

ST. GEORGE'S HOSPITAL.

TWO CASES OF SARCOMA DERIVED FROM THE PERIRENAL RETRO-PERITONEAL TISSUE ON THE RIGHT SIDE CONTAINING A PSEUDO-CYST.

(Under the care of Dr. H. D. ROLLESTON and Mr. G. R. TURNER.)

THE importance of the subperitoneal tissue as a site for new growths and other morbid processes was not fully recognised before the late Mr. William Anderson's very able paper read at the Carlisle meeting of the British Medical Association. Most of the retro-peritoneal sarcomata grow but slowly; a very good instance of this was reported by Meeringer.[1] Histologically the majority of these growths are spindle-celled sarcomata with a varying amount of fibrous tissue.

CASE 1.—A woman, aged 41 years, was admitted into St. George's Hospital in June, 1899, with the history that she had previously had some signs of more or less intestinal obstruction and was losing flesh. She was a spare woman, with a hard, moveable tumour rather smaller than a cricket-ball in the right iliac and lumbar regions. She had no abdominal distension or signs of intestinal obstruction, but it was thought that she might have malignant disease of the cæcum which did not involve or obstruct the ileo-cæcal valve. After she had been in the hospital for some time she became insane and refused to take her food, so that nasal feeding became necessary. This suggested that there was possibly a secondary tumour in the brain; ophthalmoscopic examination showed that the optic discs were normal. The mental condition continued and, getting weaker, she died.

Necropsy.—At the post-mortem examination, which was performed by Dr. Lazarus-Barlow, the pia-arachnoid of the brain was found to be opaque as in chronic alcoholism, but otherwise the brain presented no gross lesion. In the abdomen a tumour surrounded by a capsule was found lying behind and to the right of the second part of the duodenum and almost in contact with the hilum of the right kidney. The growth had no structural connexion with the kidney, ureter, or suprarenal capsule, all of which were healthy. It was adherent to the right side of the second part of the duodenum. On slitting up the latter a raised crater-like orifice as big as the end of the little finger was found in the lower part of the second portion of the duodenum, well below the opening of the biliary papilla (*vide* Fig. 1). This sinus led into a pseudo-cyst (*vide* Fig. 2) contained in the tumour, evidently produced by breaking down of the white growth. There were no growths elsewhere, and except for a small lipoma attached to the mucous surface of the ileo-cæcal valve the other organs were natural. The tumour appeared to have arisen in the retro-peritoneal tissue over the kidney close to the second portion of the duodenum and subsequently to have become adherent to the bowel. It did not appear to have originated in the wall of the duodenum. The tissues round about the tumour were very lax and readily allowed the tumour to move downwards towards the right iliac fossa. This probably accounted for the tumour having during life appeared to be in the region of the cæcum.

Microscopically the growth was a medium-sized spindle-celled sarcoma showing fibrification; in some places smooth muscular fibres with rod-shaped nuclei were present; but the mass of the tumour was undoubtedly sarcomatous. Sections taken from the wall of the pseudo-cyst showed inflammation and necrotic changes.

[1] Wiener Allgemeine Medicinische Zeitschrift, 1898, No. 34.

For the excellent drawings illustrating this case we are indebted to Dr. E. A. Wilson.

CASE 2.—A man, aged 45 years, was admitted into St. George's Hospital with pain in the right hypochondrium which radiated to the shoulders. In the last three months he had lost a stone in weight. There was no history pointing to the likelihood of hydatid infection and syphilis was denied. Two years before he had jaundice and lead colic. He was a thin man with some emphysema of the lungs, but otherwise the thoracic organs were normal. In the abdomen there was a hard tumour continuous with the liver and in the position of the gall-bladder, which bulged into the loin. The surface of the tumour was irregular and a grating sensation suggesting peritoneal friction could be felt over it. There was no thrill or fluctuation. The percussion note over it varied, being sometimes dull and sometimes partially resonant. The urine was natural and there was no jaundice. The diagnosis lay between a renal growth and a tumour growing from the under surface of the right lobe of the liver. He was put on full iodide treatment but without any beneficial result. After he had been under treatment for a fortnight he had pain in the right testicle pointing to some interference with the renal plexus. As the man desired to have something done to relieve his pain Mr. G. R. Turner saw him and agreed to perform an exploratory operation, with a view of, if possible, removing the tumour.

The operation was performed on May 11th, 1900. An incision made in the right linea semilunaris exposed a tumour of the size of a child's head arising from the region of the right kidney and projecting up under and below the right lobe of the liver from which, except for adhesions to the gall-bladder, it was quite free. The tumour had a vascular capsule, but save for its connexions to the back of the abdomen was not united by adhesions to any of the abdominal viscera except the gall-bladder from which it was peeled off. At the back of the abdomen, however, it appeared to be adherent to the inferior vena cava, above, and to the right of, the mesentery. Considering the freedom of the tumour from adhesions and its large size it seemed probable that it might not be a malignant tumour and that its removal, though a formidable task, was justifiable. The capsule contained a number of large veins and bled freely on being incised. Several layers of fibrous tissue were cut through and it was then found possible to peel the capsule off the tumour. The very deep connexions of the tumour to the back of the abdomen made entire removal so dangerous that it seemed safer to remove as much as possible of the tumour piecemeal. This was accordingly done and resulted in the removal of nine ounces of whitish-grey growth closely resembling to the naked eye a fibromyoma of the uterus undergoing early myxomatous degeneration. There was no cavity or pseudo-cyst in the tumour. Some of the tumour together with its capsule was left behind.

Microscopically the tumour was a fibrifying sarcoma composed of medium-sized spindle-cells with oval nuclei. In places there was commencing necrosis of the new growth. A few muscular fibres, with rod-shaped nuclei, probably derived from the subperitoneal tissue where they are normally present, were seen.

A considerable quantity of blood-stained discharge necessitated the dressings being renewed twice in the first 24 hours. Sickness then set in, but was relieved after the plugs of gauze were removed. The patient slowly recovered, and the wound having almost healed he left the hospital, but he returned in August with increase in the size of the tumour and pus discharging from a sinus about the middle of the wound. The patient developed a hectic temperature, had rigors for a week before death, and rapidly went down-hill.

Necropsy.—At the post-mortem examination, which was performed by Dr. O. F. F. Grünbaum, it was found that there was a large white tumour adherent to the scar, the under surface of the right lobe of the liver, and the small intestines. It arose from the retro-peritoneal tissues over the right kidney, and though readily separated was adherent to the outside of the capsule of the kidney in its anterior third. The right suprarenal body was healthy and independent of the growth. The growth, which was lobulated and of the size of a man's head, contained a central cavity filled with about three-quarters of a pint of dark brown very offensive fluid—sanious pus. There were no secondary growths in the body.

Microscopically, the growth was adherent by its capsule to the surface of the liver; but there was no invasion of the liver by new growth. The tumour had evidently contracted

FIG. 1.

Interior of the second part of the duodenum showing crater-like orifice through which the pseudo-cyst in the sarcoma discharged. The outside of the tumour is also seen. A pointer is shown passing through the perforation. (Case 1.)

FIG. 2.

Pseudo-cyst in the sarcoma opening into the duodenum showing ragged internal aspect of growth. A pointer is placed in the communication between the pseudo-cyst and the duodenum. (Case 1.)

inflammatory adhesions as the result of the operation to the neighbouring parts, and had softened down in the centre into a pseudo-cyst. In other respects it was much the same as at the operation. Microscopically, it was a medium-sized spindle-celled sarcoma. As in the growth removed at the operation there were areas where the growth was fibrifying. Examination of the walls of the pseudo-cyst showed necrotic changes and infiltration with red and white blood corpuscles.

Remarks by Dr. ROLLESTON *and* Mr. TURNER.—The points of interest are as follows. 1. The occurrence of encapsuled sarcomata arising from the retro-peritoneal tissue over the right kidney. Retro-peritoneal sarcomata are uncommon; Gurlt found that in 14,630 tumours examined at Vienna, of which 894 were sarcomata, there was only one from the retro-peritoneal space. In an analysis of 61 recorded examples tabulated by Dutton Steele[1] it appears that the right side of the body is more often affected, but no explanation for this is forthcoming. 2. Though histologically sarcomatous, parts of both tumours presented an appearance which might be taken to suggest that a fibromyoma had become transformed into a sarcoma. That this was the case in this instance we do not believe; it is more probable that the smooth muscular fibres were included in the growth and were those found in the retro-peritoneal space. Smooth muscular fibres were present in two retro-peritoneal sarcomata collected by Steele. It may, however, be pointed out that retro-peritoneal leiomyofibromata have been described[2] and that uterine fibromyomata may undergo sarcomatous change[3] 3. The freely moveable condition of the tumours (in Case 1 at the necropsy and in Case 2 at the operation), their encapsulation, the general absence of infiltration, and the fact that there were no secondary growths show that in spite of their sarcomatous structure the growths were comparatively benign. 4. The formation of pseudo-cysts in the centre of both these tumours. This would appear to be fairly common in tumours derived from the retro-peritoneal space; in his 61 cases Steele found this change in 35 per cent. It is probable that in our cases the cyst formation was due to inflammatory and necrotic changes set up by infection, in Case 1 from the duodenum and in Case 2 from the operation wound. 5. The great difficulties that may arise in the complete removal of growths derived from the retro-peritoneal space, even when, as in our cases, the tumours are more or less pedunculated. In Case 2 the growth was adherent to the inferior vena cava and so could not be entirely removed, while in Case 1 the duodenum would have to have been opened had removal been undertaken. In other cases of retro-peritoneal sarcomata that we have seen the growth has been flattened and spread out behind the peritoneum, and operation, which was not suggested, would, if attempted, have been quite futile.

[1] American Journal of the Medical Sciences, March, 1900, vol. cxix., p. 311.

[2] Vide Anderson: Surgery of the Subperitoneal Tissue, Brit. Med. Jour., vol. ii., 1896, p. 1093; Sheild: Transactions of the Royal Medical and Chirurgical Society, London, vol. lxxx., p. 205.

[3] Finlay: Transactions of the Pathological Society of London, vol. xxxiv., p. 177; Doran, Ibid., vol. xli., p. 206; and Dickinson, W. L., Ibid., vol. xlv., p. 184.

HEALTH MATTERS IN POPLAR.—The energetic medical officer of health of the borough of Poplar, Mr. F. W. Alexander, has recently issued a circular to the owners and occupiers of wharves, factories, and workshops dealing with the question of rats and the plague. He asks that if any unusual mortality is detected among rats he should immediately be informed of the same. He also gives notice that arrangements have been made with Dr. E. Klein for the bacteriological examination of the body of any rat which it is thought desirable should be examined. Mr. Alexander has also made a report to the Housing Committee of the borough which embodies various opinions and suggestions already made as to the best manner of carrying through a reform in the all-important question of the housing of the poor. Besides these opinions Mr. Alexander adds some suggestions of his own which are eminently practical. The sanitary authority has also issued some admirable hints regarding the management of infants, drawn up by their medical officer of health for gratuitous distribution. The appalling manner in which the children of the poor are fed is only too well known to every hospital physician and so far as instructions go those of Mr. Alexander are admirable, but poverty, laziness, and, we must add, the despair born of the perpetual struggle for bread and money for the rent go far to do away with the effect of any instruction.

Medical Societies.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A CLINICAL meeting of this society was held on April 26th, Sir R. DOUGLAS POWELL, the President, being in the chair.

Sir HUGH BEEVOR exhibited two Healthy Left-handed Adults to illustrate the normal thoracic resonance in left-handed persons. They afforded positive proof that the lesser resonance of the right chest in right-handed persons was due to the greater muscular development on that side. He remarked that in the absence of emphasis upon this point in text-books mistakes were still often made and disease was wrongly suspected. Dr. W. H. Brazil[1] had emphatically called attention to this point in left-handed persons. It might be noted in these cases that the pulmonary resonance did not rise so high above the left clavicle as above the right. The diminished resonance, or higher note, could be detected below the clavicle quite distinctly in the younger man. He had found no reason to suspect that either patient was the subject of disease. These observations were repetitions of others which he had made formerly upon left-handed persons.—The PRESIDENT asked Sir Hugh Beevor whether he had invariably noticed that in right-handed persons the percussion resonance extended higher on the right than on the left side.—Dr. PERCY KIDD asked whether the normal defective resonance was chiefly in the apical region or whether it was universal.—Sir HUGH BEEVOR, in reply, said that he had not found the difference on the two sides an invariable rule, but it was a common occurrence. It was his practice to carry the resonance up above the clavicle as high as possible, and it did not generally extend as high on the right as on the left, whereas in these left-handed persons it extended highest on the right.

Dr. F. G. STILL exhibited a case of Unusual Obesity in a Child, aged seven and a half years, who weighed 4 stones 11½ pounds and measured only 42½ inches in height. He was very thin a year ago, when he became rapidly fatter; since that time there had been a steady increase of fat, and during the last two months he had been somewhat short of breath. Within the last three weeks the lower part of the abdomen and the upper parts of the thighs had shown irregular bluish-red lines, where the skin was thinned and shiny with dilated venules, evidently analogous to "lineæ gravidarum." A month ago he awoke one morning quite blind, but otherwise in his usual health; the blindness lasted 48 hours. Sight was normal when the child awoke on the third morning. He complained occasionally of some pain "like pins and needles" over the vertex of the head, but otherwise there had been no pain anywhere. At the age of three and a quarter years the child had some severe illness which began with convulsions and was called "peritonitis." It lasted four months and since then the abdomen had always been rather large. With the exception of an attack of measles at the age of four years the child had had no other illness. One brother had had pulmonary tuberculosis, and there was some more distant history of tuberculosis. The other members of the family were all thin. There was some hair over the pubes, which was said to have been present for two years; the child's voice was not gruff. The right testicle was normal; the left was not felt. The thyroid gland could not be felt; it was certainly not enlarged. The viscera seemed to be normal. The heart showed nothing abnormal except an occasional slight irregularity of rhythm and marked accentuation of the second sound in the aortic area.—Dr. NORMAN DALTON remarked that this case, excepting in point of age, resembled one which he had seen last year. The patient was a woman, aged 30 years, who in the course of a few months had developed obesity, a growth of hair on the face, a dark complexion, with certain symptoms of Graves's disease—viz., thyroid enlargement and tachycardia. The child in Dr. Still's case had a rapid pulse. His (Dr. Dalton's) patient had rapidly entered the typhoid state and had died. He believed that the two cases resembled each other.—Sir DYCE DUCKWORTH had met with sporadic

[1] Brit. Med. Jour., Oct. 28th, 1899.

instances of obesity in gouty families. He could not explain the connexion, but it was an undoubted fact, and some French observers had recognised the association and had named the condition "arthritic obesity."—Dr. STILL, in reply, remarked that in view of the pubic and facial hair he could not help thinking that the obesity was in some way connected with premature puberty and he referred to the case of a child, aged 13 years, who was enormously fat and who had begun to menstruate at the age of 10 years. The obesity of eunuchs probably had some explanation of the same kind. The sudden loss of vision in the case he had brought forward was, he suggested, possibly a neuropathic change. He had recently had a case of "lipomatosis neurotica" under his care; perhaps this case was of a neuropathic order.

Sir DYCE DUCKWORTH exhibited a case of Myxœdema which had been under observation at intervals for 23 years. The patient began to manifest symptoms of myxœdema in 1878, and she came under his care as an out-patient at St. Bartholomew's Hospital in 1879. He recorded the particulars of her case in the Transactions of the Clinical Society of London for that year. He lost sight of her for some time, but she subsequently came under his care in 1893, weighing 14 stones 4 pounds and she remained for three months under observation. Her weight was reduced to 10 stones 5½ pounds. Her case was one of the earliest which had been brought before the notice of the Clinical Society of London, and at that time the precise nature of the malady was not ascertained. The influence of thyroid treatment was most marked in this instance. The patient was growing steadily worse and was becoming languid, helpless, and lethargic—a burden to herself and to her family. Within a few months she regained her juvenile figure and became bright and useful once more. Her present complaint was chiefly of headache and there was no obvious relapse of the myxœdematous state. She had taken thyroid elixir (one fluid ounce, equal to one thyroid gland [sheep's]) in fluid half-ounce doses per diem for long periods, then less and less to the amount of two fluid drachms in a week for years. Her present weight was 10 stones 13 pounds. There were no supraclavicular fatty masses to be felt.—Sir DYCE DUCKWORTH, in reply to Dr. ALEXANDER MORISON, said that the patient's pulse had always been slow. This case was one of the earliest that had been brought before the society, in 1880, when the disease in this patient had already existed some time. Every time she took the thyroid elixir the improvement had been immediate and marked. She was at one time nearly bald, but her hair had grown again, and she now looked remarkably young for her age. She had borne four children since commencing treatment, the first one being rachitic.

Dr. C. E. BEEVOR exhibited a case of Retro-colic Spasm occurring in a man, aged 44 years. For five years he had had occasional attacks of muscular rheumatism in the lumbar region. The present illness had begun two years before with "lumbago"—i.e., sharp pains in the back—which became later of a dull, aching character. In 1899 he had spasm of the muscles round the hip, with hardness and stiffness there, which gradually passed up to his shoulders, and by September, 1900, he had marked retention of the head and the neck. As the patient lay resting at full length there was no spasm, but on sitting up, and especially on walking, he got spasm of the muscles of the neck so that the cervical spine was extended with the concavity backwards and the chin was depressed. The extensors of the head, the complexus and trapezius, did not contract and the muscles affected were probably the deep extensors of the cervical spine. The sterno-mastoids were tightened up, but apparently they were not spasmodically contracted. On walking the erector spinæ contracted spasmodically, producing lordosis and throwing the chest forwards. The spasm ceased if the head was allowed to fall forwards fully flexed, or if any support was given to the head from behind, or on lying down. The treatment consisted of the "Weir-Mitchell," suspension from the head three times a day for 90 seconds, strychnine, cannabis indica, bromides, belladonna, and the constant current.

Dr. LEE DICKINSON exhibited a case of Lymphadenoma associated with Growths in the Skin. The patient was an emaciated boy, 16 years of age, who presented numerous glandular swellings in different parts of the body, and growths upon the skin of the chest and elsewhere. He had been subject to prolonged administration of arsenic, during which time he had become worse and the lymphoid growths had developed in the skin. Since the cessation of the arsenic there had been diminution of the lymphoid growths and general improvement had taken place.—Mr. W. G. SPENCER remarked that there were several features which suggested a mixed infection of tubercle and inherited syphilis in this case. The glands in the neck were, he believed, tuberculous; the nodule on the tibia and the pigmented scars were syphilitic.—Dr. A. E. T. LONGHURST quite agreed with the last speaker and thought that anti-syphilitic treatment should be tried.—Sir HUGH BEEVOR had recently had a case under his care which had been diagnosed to be lymphadenoma, but at the necropsy it turned out to be tuberculosis.—Dr. PERCY KIDD asked if the blood had been examined.—Mr. CHARTERS SYMONDS suggested that a microscopical examination of the lesions might throw light on the case.—Dr. LEE DICKINSON, in reply, could not regard the case as one of mixed infection. Almost every gland in the body had been affected at one time or another. Excepting the node on the tibia there were no signs of syphilis. He had examined the blood on two occasions; the red corpuscles were diminished, the white corpuscles were about twice the normal. The patient had had arsenic continuously for eight months, but had got steadily worse; during the last six months without it he had improved.—Dr. A. G. PHEAR recalled certain cases of syphilis now under his care. When arsenic was given to these patients infiltrations arose in the skin which went on to ulceration. On ceasing the arsenic the masses disappeared. He was afraid that microscopical examination of the case under discussion would not help them very much, for no line could be drawn between the structure of lymphadenoma and gumma of the skin; both were granulomatous material. He believed that this case was syphilitic.—The PRESIDENT suggested that Dr. Dickinson would perhaps report later the results of anti-syphilitic treatment.

Dr. PERCY KIDD exhibited a case of Congenital Heart Disease (? Patent Ductus Arteriosus). The patient was a woman, aged 21 years. She exhibited slight cyanosis, especially of the conjunctiva, but no clubbing of the fingers. The heart was enlarged on the right and the left sides; a faint diastolic thrill could be felt in the second left space; the second sound everywhere was very loud, with the maximum intensity at the third left cartilage. At this point a short diastolic murmur following the second sound was audible at times. The first sound was everywhere feeble and generally doubled. The patient had suffered from attacks of cardiac pain from childhood and from dyspnœa for three years. There was no history of rheumatism, scarlet fever, or chorea.—Dr. W. FORBES ROSS asked if it was possible to exclude aortic regurgitation from this case. An aortic regurgitation murmur could be heard as loudly on the left as on the right of the sternum, a fact which he believed Dr. Ringer was the first to point out. The facts of this case would fit in with that diagnosis.—Dr. SEYMOUR TAYLOR pointed out that the characteristic pallor of aortic regurgitation was wanting in this patient, but on the other hand she presented cyanosis.—Dr. PARKES WEBER asked if Dr. Kidd had considered the possibility of tricuspid stenosis.—Sir DYCE DUCKWORTH was inclined to agree with Dr. Kidd's diagnosis. During life the diagnosis of these cases was largely a matter of guesswork.—Dr. ALEXANDER MORISON thought that the diagnosis "patent ductus arteriosus" was properly marked with a query. Pulmonary regurgitation might exist without any symptoms whatever. He would suggest as a possible diagnosis that it might be one of those rare cases of slight mitral stenosis, probably congenital.—The PRESIDENT remarked that this was an interesting and obscure case about which many diverse opinions might be expressed. He did not agree that the diagnosis of mitral stenosis was out of court. In point of fact, there were two important clinical evidences of stress in the pulmonary circulation—viz., marked hypertrophy of the right ventricle and a strongly accentuated second (pulmonary) sound. In his opinion the first part of the doubled first sound might be regarded as a prefix. The heavy and palpably thudding second pulmonary arterial sound was certainly prolonged. It might be that the valve had become strained. He would not, however, venture to express a more decided opinion and he hoped that Dr. Kidd would keep the case under observation and would report again about it.—Dr. KIDD, in reply, could not admit the possibility of aortic regurgitation. He, like many of those who had spoken, had thought that the disease was

mitral stenosis when he first saw the patient. But on further investigation he thought patent ductus arteriosus was more probable. It was, however, only possible to hazard an opinion on these cases during life.

Dr. PERCY KIDD also exhibited a case of Myxœdema in a girl, aged 14 years. She presented on admission, in February, 1901, the typical appearances of that disease and the thyroid gland could only be felt with difficulty. There were firm, fatty masses in both supra-clavicular fossæ. The expression was stolid, but the intelligence was good. When she left school, at the age of 13 years, she had reached the fourth standard. The history suggested a congenital origin, though the appearances were not those of cretinism. The child did not walk till the age of two and a half years, and she used to pass urine and stools in bed up to the age of six years. At two years old she began to get very fat. She had always been sluggish and not nearly as bright as the other children. For the last 12 months she had suffered from increasing hebetude and frequent headaches. Treatment with thyroid extract produced rapid improvement, and the appearance of the child was no longer characteristic of myxœdema.—Dr. SEYMOUR TAYLOR took exception to the term "myxœdema" being applied to this case. He thought that it was rather a mild degree of cretinism. Up to the age of two years the child could not walk and passed her evacuations under her. Sir William Gull's definition of myxœdema was "a cretinoid condition supervening in adult women." Moreover, he would like to ask whether the word "myxœdema" should not be done away with altogether. An excess of mucin was not really found in the tissues, as originally thought, and the word "myxœdema" had therefore no real meaning.—Dr. KIDD, in reply, admitted that the child was backward. The case was interesting, as showing the connexion between myxœdema and cretinism.

Dr. FRANCIS WARNER (introduced by Dr. PERCY KIDD) exhibited a case of Hypertrophic "Pulmonary" Arthropathy occurring in a woman, aged 36 years. She had had influenza 18 months ago. 12 months ago the fingers gradually began to swell, commencing with clubbing of the tips; the knees also began to swell, and the feet and ankles. All the affected parts had got much worse lately. She had had pain which became worse after exertion in all these affected parts. The features were not altered. She had wasted generally and had lost 4 stones 4 pounds in weight. She had had cough this past winter, but previously she had not been subject to any lung troubles. The nails were large and curved. There was considerable thickening round the phalangeal joints; the metacarpus and metatarsus were thickened and there was thickening of the lower third of the shafts of the legs and of the bones of the forearms. There was some effusion into the wrists and knees, especially into the latter. There was wasting of the spinal muscles and interossei and of the small muscles of the hands. The face was not affected.—Mr. RAYMOND JOHNSON asked if there were now, or if there had been at any time, physical signs in the lungs. If not what was the reason that the term "pulmonary" had been applied? He suggested a possible septic source for the joint mischief, and asked if the patient had had leucorrhœa.—Dr. W. FORBES ROSS had elicited a history of "hysterical" fits or attacks in this patient. He had had nine patients under his own care with epilepsy with the same joint mischief. Might not the joint trouble in Dr. Warner's case be of nervous origin?—Dr. C. E. BEEVOR pointed to the hands, which were large and sausage-like, and suggested acromegaly, but there were none of the other symptoms of that malady. Had this been thought of?—Dr. WARNER, in reply, said that there were no signs, nor was there any history, of lung trouble. The case, however, fitted in with Marie's description of pulmonary osteo-arthropathy. In 10 out of that observer's 95 cases there were no evidences, nor was there any history, of lung disease. There were no evidences of nerve origin in this case, nor were there other symptoms pointing to acromegaly. Moreover, in acromegaly the enlargements affected the ends of the bones; whereas here the increase was all along the shafts. Radiograms from the case were exhibited demonstrating these features in the two diseases.

Mr. J. HUTCHINSON, jun., exhibited a case of Inveterate Ulcer of the Hand occurring in a man, aged 36 years. In April, 1900, he noticed a small red spot on the dorsum of the right hand, which ulcerated and spread, only healing up slightly at the original starting-point. He was under treatment for struma for four months without improvement. The ulcer was then scraped at the Royal Free Hospital without result. He was treated at the London Hospital by Roentgen rays and iodides internally from September, 1900, to March, 1901, with some temporary improvement. He was transferred to Mr. Hutchinson's care on March 27th, 1901, and was now being treated with mercurial ointment and the ulcer was slowly healing.—Mr. CAMPBELL WILLIAMS could not regard this case as any form of scrofuloderma. The mischief, whatever it was, had started from a small scratch, and the case, both in its history and its present features, was highly suggestive of that rare condition, dermatitis repens. He could call to mind a case resembling this one in which the process went on for nearly a year, but when properly treated it got quite well.—Mr. HUTCHINSON, jun., in reply, was inclined to regard this case as one of strumous ulceration occurring in skin which was badly nourished. The process was allied to Bazin's disease and, like that malady, it was healing with remarkable rapidity by the simple means of keeping the part warm.

Mr. CHARTERS SYMONDS exhibited a case of Dislocation of the Patella occurring in a young man. The condition was probably congenital, though the history was somewhat indefinite.

Mr. CHARTERS SYMONDS also exhibited a case of Hæmorrhagic Gummatous Myositis occurring in a man, aged 45 years. There was a hard, irregular, infiltrating mass in the extensors of the right thigh, over which the skin presented an infiltrating eruption. — Mr. CAMPBELL WILLIAMS asked if this case might not be true sarcoma of the muscle. It came on so very quickly after injury.—Mr. CHARTERS SYMONDS replied that when the patient came under treatment a year ago (one year after the injury) the swelling was larger than it was now, and he thought that this was rather against the diagnosis of sarcoma.

Mr. CHARTERS SYMONDS also exhibited a girl whose Knee-joint had been Erased eight years before. The case was exhibited to show the condition of the knee-joint. The movement was free to a right angle, but there was a good deal of weakness. The question raised by the case was whether the patient was as well off as she would have been after excision. He (Mr. Charters Symonds) suggested that a stiff leg would probably be more useful than was the present condition.—Mr. W. G. SPENCER referred to a similar case shown by Mr. Ede in which movement of the joint was obtained.—Mr. RAYMOND JOHNSON asked what steps Mr. Charters Symonds took to obtain fixity. He (Mr. Johnson) was not sure if this patient was a gainer by having a moveable joint.—Mr. CHARTER SYMONDS said that he had exhibited the case because he thought it was instructive as to the result. At the operation everything was taken away excepting a portion of the cartilage covering the ends of the bones. He remembered Mr. Ede's case; it was shown as the most desirable result that could be obtained and the amount of movement which was possible was not quite up to a right angle. He thought, on the whole, that they had better fix these joints.

BRITISH GYNÆCOLOGICAL SOCIETY.

Retroversion of the Uterus.

A MEETING of this society was held on April 25th, Dr. J. A. MANSELL MOULLIN, the President, being in the chair.

Dr. H. MACNAUGHTON-JONES introduced the discussion on Retroversion of the Uterus and backward displacements generally by a review of the anatomico-physiological points bearing on their etiology. He accepted Schultze's definition of retroversion, drawing the distinction between retro-positions and deviations and retroversion or retroflexion, briefly touching on such causes as atonicity in the abdominal parietes, over-distension of the bladder, rectal complications and neglect of constipation, perimetritis with exudations or adhesions, pregnancy or the puerperium, subinvolution, tumours of the uterus, in the broad ligaments, or bladder. He noticed the causal relationships between ovarian growths and retroversion. In the uterus itself metritis, tumours, and congenital conditions were referred to and the mode of action of these various causes in altering the normal axis of the uterus was touched on, as well as the supports of the uterus in altering its axis directly or indirectly. The relation of perineal and vaginal abnormalities was considered and the clinical division of backward displacements into those in which the uterus was reducible

and moveable, with or without complications, and those in which the uterus was adherent and irreducible, with or without adnexal complications, was accepted for its practical value in determining the treatment. The importance of the dorsal position and the combined methods of examination, as well as the knee-elbow, in diagnosis, as also the advantages of Schultze's directions for diagnosis and manipulation, were noticed. Having touched on the various symptoms arising from retroflexion he said that from every point of view he refused to count a woman as healthy who had a retroverted uterus, this not only from its physical causes, but from its psychical effects. Reviewing the prophylactic treatment, the importance of attention to the bladder under ordinary conditions, when wearing a support and after labour, attention to the rectum, and the position of the uterus during the puerperium, as well as the need for following up the convalescence after pelvic inflammations generally by securing complete resolution of all effusions and the normal position of the uterus, were dwelt on, as also the means to be taken to absorb plastic exudations and correct peritoneal contractions. Attention to such clinical points would render retroversion a matter of much less frequent occurrence than it was at present, the wider recognition of the causes leading to its earlier rectification effecting more rapid and permanent cure. Dr. Macnaughton-Jones placed three propositions before the meeting: 1. Every mobile and reducible uterus should always be treated in the first instance by a support, worn for a space of time proportionate to the tendency there was on the part of the uterus to revert to the backward position. Associated adnexal conditions were frequently amenable to treatment in such cases, and it should precede and follow the reposition of the uterus. 2. Should the adnexal condition be such in this class of case as to demand operation, colpotomy was that of selection, with resection of the adnexa and the subsequent use of a support. 3. An immoveable or irreducible uterus, or a reducible uterus in which the associated conditions in the uterus itself, in contracted peritoneal folds, or adnexal adhesions, made it clear that no pessary would effect a cure or enable the uterus even temporarily to remain in the normal position, should be treated by operation, the nature of which would depend on the age and child-bearing prospects of the woman, the amount of adnexal disease, the condition of the vaginal outlet and perineum, such complications as cystocele or rectocele, and the coexistence of uterine disease with the displacement. Dr. Macnaughton-Jones entered into an analysis of the cases in which a pessary, with collateral treatment, should be the plan of treatment adopted and also of those in which operative measures were absolutely necessary. The views of Delajaniére, Goldspohn, Kohn, Veit, Rissman, and Flaischlen were specially referred to, and the various operative procedures following on Alexander's method or modifications of it, as those of Kustner, Edenbohls, and others, formed the first class of operative interferences. In the second were the extra-peritoneal or intra-peritoneal fixation of the uterus itself to the vagina, as in the operations of Müller, Duhrssen, and A. Martin; and in the third class of fixation of the uterus by the direct mesial methods, as in the operations of Leopold, Czerny, Pozzi, and others, the lateral of Olshausen and Sänger, or the suspension method of Howard Kelly (fixation to the peritoneum and sub-peritoneal fascia). The operation he himself performed was either ventro-fixation or suspension, and where he considered it necessary to operate he thought cœliotomy afforded the best and safest means of correcting the majority of adnexal complications with no greater danger to pregnancy than by other methods. Given a simple case of mobile and reducible uterus it now appeared from the mass of evidence before the profession that the Alexander-Adams operation was the classical method of dealing with such a condition.

Dr. W. ALEXANDER enumerated many clinical consequences which he had proved again and again to be the result of backward displacement. When the displacement was acute and recent the symptoms were prominent. As the disease became chronic the symptoms disappeared and this fact gave rise to the statement that the displacement had no symptoms. What would be said of a surgeon who, finding an old mobile dislocation of the shoulder, said that a recent dislocation produced no symptoms; yet the cases were parallel. Displacements resulted from sudden strain or wrench or over exertion at the menstrual period, and occurred in connexion with miscarriage, abortion, and confinement. By palliative treatment the symptoms might be entirely relieved. It was only a question of time, care, and skill, but often these were unavailable, and operative treatment was generally necessary. Referring to his own operation, shortening of the round ligaments, if the uterus sloped back ever so little it would prove a failure and he thought that this was the source of failure in a good many cases. Where adhesions were present he opened Douglas's pouch, passed in his finger and broke them down, until the uterus could be easily pushed forward into anteversion. He then shortened the round ligaments, having packed the vagina with gauze. If any lesion were found in the pelvis he removed it by the vaginal opening at the same sitting.

Professor J. W. TAYLOR said that backward displacement was a dislocation which, when recently acquired, often occasioned great suffering, especially if associated with metritis and menorrhagia, but which when chronic and not accompanied by enlargement of the uterus might not give rise to symptoms. It was therefore the recent or the intractable cases, in which the uterus was enlarged, which mainly required treatment, and this to be successful should deal with the enlargement as well as the displacement. Treatment by pessary was rarely curative, though valuable in relieving urgent symptoms and in enabling the surgeon to estimate how far symptoms were due to the displacement. He had considerable operative experience of vagino-fixation, though in most cases it had been simply incidental to anterior vaginal cœliotomy, and also of ventro-fixation, though it had generally been accessory to other operations involving abdominal section. In vagino-fixation, if the union were seroserous only, it sometimes gave way. He had had two such cases. If the union were firmer there was undoubted danger in subsequent pregnancy. Illustrative cases were quoted. The older operation of ventro-fixation rarely gave the patient a feeling of perfect relief and security. He had performed Kelly's operation as accessory to other abdominal operations and had been very pleased with the results. Doyen's operation he found to be insufficient. Doyen himself now combined it with shortening of the round ligaments. Shortening of the round ligaments, or Alexander's operation, he believed to be far and away the best for uncomplicated cases of backward displacement. When, as in most cases requiring operation, chronic endometritis was present he began the round ligament operation by vaginal disinfection and curetting.

Dr. C. ROUTH believed that there were many cases of retroflexion which would yield to treatment with a stem pessary if associated with other measures, which would prove intractable, whatever mode of treatment were adopted, if a stem pessary were not employed. Hæmorrhage, which was usually considered an objection to the use of the stem, he regarded as beneficial, inasmuch as it relieved uterine congestion.

Mr. F. BOWREMAN JESSETT said that where there was no doubt as to the diagnosis or as to whether the fundus was fixed by adhesions he had the patient anæsthetised. Under an anæsthetic it was often found that a uterus which had previously appeared to be absolutely fixed could be readily replaced in the normal position. A large number of patients could be relieved and cured by the introduction of a pessary. He employed a Hodge with a large glycerine pad for two or three months when he replaced it by an ordinary Hodge or Smith-Hodge. Stem pessaries were sometimes of much service if introduced for a week, the patient being kept in the recumbent posture. If an operation was necessary he preferred ventro-fixation.

Dr. GEORGE ELDER agreed with Dr. Alexander that the chief causes of retroversion and retroflexion were excessive exercise at the menstrual periods and badly attended miscarriages and confinements. He now and then used a stem in combination with a pessary and believed that it assisted drainage and relieved congestion. With regard to treatment in unmarried girls, a properly fitting Hodge, supplemented by general treatment, was sufficient in most cases. If a uterus was found to be enlarged and retroverted or retroflexed directly after labour or miscarriage steps should be taken to bring about involution. After the acute stage had passed care should be taken that any metritis present was treated and the perineum, if ruptured, should be repaired before applying the pessary. The difficulty he experienced in finding the round ligament had led him to abandon Alexander's operation and he now performed abdominal ventro-fixation.

Professor JAPP SINCLAIR did not think that it was a justifiable proceeding to leave the uterine stem in longer than a fraction of a week. In his opinion Alexander's operation, which he had performed 40 or 50 times, was only suitable to cases in which no complications existed—that was to say, cases which could be cured without operation. If from the condition of the uterus the retroflexion had obviously existed for some time, and the case could not be cured without operation, the only safe procedure was ventrofixation. Essential points were, if a subsequent pregnancy were probable, that the fundus uteri be not involved in the stitches and that the physiological play of the round ligaments be preserved.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 19th, Dr. Gordon Black, the President, being in the chair.—Dr. Gordon Sharp read a paper on Food and Disease in which he asked the members of the profession not only to take a greater interest in this important question but also to study the subject in a more comprehensive fashion and in the light of common sense so that the medical profession might be, as it ought to be, the only dictator in all matters relating to food and disease. In the treatment of Bright's disease and diabetes mellitus he advocated not so much an abstinence from proteids and carbohydrates respectively as a dietary that would maintain the balance of health. Science did not teach that they were to give no proteid in Bright's disease or no carbohydrates in diabetes. She only taught that the equilibrium would be more easily upset by proteids in Bright's disease and by carbohydrates in diabetes than by other food. In the treatment of dyspepsia Dr. Sharp pointed out the danger of loading the alimentary tract with brown bread, farinaceous food, and cocoa, and he advocated the judicious employment of meat and said that cocoa was not a good food in dyspepsia because it was flavourless and insipid, while tea when rightly prepared had a delicate aroma and answered well. He spoke of the danger attending the use of dried proteids and tinned foods on account of the lack of natural flavour and zest. In the feeding of infants he was inclined to employ unboiled milk and risk tuberculosis rather than to run the more frequent risk of malnutrition due to the use of boiled milk. He believed that the loss of citric acid in boiled or pasteurised milk was not, as had been asserted, the cause of malnutrition and infantile scurvy, the disproof being that scurvy could be cured or prevented by eating potatoes or other fresh vegetable which contained no citric acid or allied body. Boiling or pasteurising altered not only the composition but also the constitution of the milk, and if it had to be put in one sentence he would say that the malnutrition depended on a loss of freshness in the milk. However, the most important factors were loss of flavour, loss of salts in general, and loss of gaseous bodies.—The President, Dr. T. Churton, and Dr. R. H. Crowley discussed the subject and Dr. Sharp replied.—Dr. A. Bronner (Bradford) read a paper on Headaches of Nasal Origin. He regretted the fact that nasal surgery had been under a cloud for the last few years. Some physicians even went so far as to declare that asthma could never be caused by nasal disease. This was going rather too far. There was nothing very characteristic or typical about headaches of nasal origin. Nasal obstruction or hypertrophic rhinitis generally gave rise to dull, aching pain with all the symptoms of so-called "aprosexia." Disease of the nasal accessory cavities generally gave rise to local neuralgic pain, often intermittent and worse in the morning. Empyema of the maxillary antrum often caused severe frontal pain, so that in many cases disease of the frontal sinus was wrongly diagnosed. Diseases of the sphenoidal sinus was generally accompanied by severe pains behind the eyes and incapacity for any mental or physical exertion. Empyema of the ethmoidal cells was the commonest cause of recurrent nasal polypi. The pains in the head varied according to the position of the cells affected. Dr. Bronner briefly recorded the history of several typical cases. Diseases of the nose and accessory cavities were extremely common in Yorkshire and were generally not diagnosed or treated. In all cases of headache the cause of which could not be discovered and in which any nasal symptoms were present (nasal obstruction, discharge, sneezing, &c.) the nose should be carefully examined and, if necessary, treated. If this were done they should not so frequently hear of the so-called incurable or "nervous headaches."—The President, Dr. T. W. Griffith, Dr. Churton, Mr. T. Pridgin Teale, Dr. James Kerr, and Mr. G. Constable Hayes took part in the discussion and Dr. Bronner replied.—The following cases and specimens were shown: Mr. Secker Walker: (1) A case of Mastoid Suppuration accompanied by Lateral Sinus Thrombosis, Necrosis of the Cochlea and Post-pharyngeal Abscess; (2) two cases of Chronic Otorrhœa cured by the Mastoid Operation; and (3) a case of Opaque Optic Nerve-Fibres.—Mr. Walter Thompson: A Fibroid of the Broad Ligament.—Dr. E. F. Trevelyan: A Dura Mater Showing the Formation of a False Membrane.—Mr. B. G. A. Moynihan: (1) A case of Tuberculous Ulceration of the Tongue; (2) a case of Choledocho-Duodenostomy; (3) a Stomach showing two Perforating Ulcers, one on the anterior and one on the posterior surface; and (4) a Calculus formed round a Foreign Body in the Prostate Gland.—Mr. H. J. Roper: Fœtus and Secundines which were retained in the uterus for 12 months.—Mr. Edward Ward: (1) Recurrent Sarcoma of the Lower Jaws; extensive excision (patient and specimen); and (2) an Enlarged Thyroid.—Dr. J. B. Hellier: (1) A Uterus removed by Abdominal Hysterectomy for unusual condition; (2) Fœtus which was delivered by Decapitation; and (3) (for Mr. W. H. Drury of Otley) a Five Months' Fœtus in membranes showing the relations of the chorion, amnion, and placenta.—Mr. Lawford Knaggs: A Calcified Fibroid Tumour of the Uterus.—Dr. C. M. Chadwick: A Perforated Gastric Ulcer.—Mr. W. H. Brown: A Perforated Gastric Ulcer in an Hour-glass Stomach.—Dr. W. H. M. Telling: (1) An Aneurysm of the Apex of the Heart; and (2) Rupture of a Blood Cyst of the Left Ventricle.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held at 20, Hanover-square, W., on April 17th, Dr. Frederic Bagshawe (St. Leonards), the President, being in the chair.—Dr. Symes Thompson read a paper on the Climate of Algiers. He showed that Algiers was now easily reached from London in two days and that it was warmer and more sunny than was the Riviera. The combined influence of the ocean and the deserts gave to the climate a value which deserved fuller recognition. Whilst Algeria itself was humid and sometimes relaxing, the hills around were exhilarating and at Hammam R'irha, 60 miles to the west and 2000 feet above sea-level, a valuable spa was available in winter when European spas were closed. At Biskra, 200 miles inland, a desert station was reached by railway having a spring as valuable as that of Aix-la-Chapelle, especially in chronic syphilitic cases, whilst at Hammam Meskontine the boiling spring issued forth in the middle of beautiful country and supplied a haven of rest from the bustle and turmoil of towns.—The President alluded to the account given by Dr. Henry Bennet of his experience of Algiers some 40 years ago, when he described the exposure of the place to cold northerly winds in contrast to the protection of the Riviera from similar winds. The further development of the town had no doubt enabled them to select more favoured positions for their modern buildings. Dr. Thompson's account of Biskra and other spas available for sulphur bath treatment during the winter months were instructive and would prove valuable.—Dr. Fortescue Fox commented upon the paucity of stations suitable for spa treatment during the winter months. The mineral waters of North Africa were chiefly of value for winter treatment.—Dr. Douglas Kerr (Bath) said that having visited Algiers personally in 1879 he was much struck with the great advance in comfort and suitability for invalid visitors. He also recognised the advantage for syphilitic patients taking mercurial treatment in winter and also the greater privacy.—Dr. Parkes Weber asked for further information as to shelter from winds at Biskra.—Dr. Thompson, in his reply, admitted that Biskra was 500 miles further north and that it was colder and probably somewhat more windy than Helouan.—Mr. A. G. S. Mahomed read a paper entitled "Polypharmacy in Nature and Art." He first endeavoured to defend the principle of polypharmacy in art. To do this he had prepared tables giving the hypothetical therapeutic equivalents of a group of drugs. He showed by examples from this the possible advantages of combining them with a view to resultants in a given direction. Observing that this was the only justifiable polypharmacy he defined what was unjustifiable. Turning to nature he pointed out that in most mineral waters there were six or seven elements; of these potash and soda were partly antagonistic; lime and

magnesia appeared almost wholly so. In vegetable drugs opium, bark, ergot, calabar bean, and digitalis contained opposing elements. He deprecated the exclusive use of alkaloids, preferring in many cases to use an extract of bark to quinine or a liquid form of opium to morphine.—Dr. Thompson, who supported Mr. Mahomed in maintaining the greater value of the crude drug over its separated alkaloids, said that every effort made to distinguish with precision the value of each constituent of a prescription deserved encouragement.—The President thought that Mr. Mahomed's attempt to estimate the value of various drugs by an arithmetical method might not be concurred in by other prescribers. Every man formed his own relative estimate of the exact value of a drug and would use drugs in accordance with that estimate. Mr. Mahomed's attempt would make men more thoughtful in the employment of remedies.—Dr. E. G. Gilbert (Tunbridge Wells) suggested that Mr. Mahomed's paper and interesting little tables would have been still more interesting if he had stated how he arrived at the exact, or even approximate, percentage of effect produced in one direction and another by each of the drugs mentioned, particularly with regard to the diaphoretics and diuretics. He (Dr. Gilbert) had watched scores of times for their effects upon the skin and kidneys and had nevertheless failed to perceive that they had any decisive action. Mr. Mahomed's estimate that potassium acetate was more diaphoretic and less diuretic than ammonium acetate was not in accordance with what was generally supposed to be the difference in the action of potassium and ammonium salts.—Mr. Mahomed, in his reply, thanked the members for their patient hearing of a paper which was chiefly theoretical. He was not surprised that members would like facts and a basis for his estimation of drugs. So would he. What could even the most distinguished authors provide in this direction? Scarcely anything. Physiological experiments were very little guide. Replying to Dr. Gilbert he said that he ranked acetate of potassium high as a diaphoretic from results of practice. He found that if a good dose of it were exhibited in about three days most patients noticed considerable perspirations. Few drugs would do that except pilocarpin and salicylate of soda which required the patient to be kept in bed.

CHELSEA CLINICAL SOCIETY.—A meeting of this society was held on April 16th, Dr. William Ewart, the President, being in the chair.—Mr. J. Foster Palmer read a paper on Cystic Disease of the Chorion. After describing the views formerly held as to the pathology of this condition and pointing out their erroneous nature Mr. Palmer gave a brief sketch of the views now held on the subject, mentioning especially the names of Gierse and Meckel, who inclined to the theory that the death of the fœtus was the cause of this degeneration, while Paget and Mettenheimer maintained that the degeneration was the cause of the death of the fœtus. Attention was also drawn to the morbid proliferating power of the cysts. Mr. Palmer then described two cases which had been under his care in 1875 and 1876 respectively. The second of these cases was of interest on account of the fact that the phenomenon had occurred a second time, after 12 months' interval, with a doubtful history of abortion between. Bearing in mind the very doubtful nature of this so-called abortion Mr. Palmer was inclined to the opinion that the second mole pregnancy might possibly have been a continuation of the first owing to a few of the cystic villi having been left behind and having thus become proliferated, in which case a nice medico-legal question might arise as to whether hydatid moles were necessarily a proof of conception having taken place even within 12 months or more.—A discussion followed, in which the President and Dr. Vincent Dickinson took part.—Dr. Barry Blacker read a paper on Light Treatment. After alluding to the fact that in very early times light rays were employed mainly in conjunction with heat, the agent being the rays from the sun, and that electricity had been found to be more easily relied upon in this country and perhaps had had a decidedly increased effect due to the fact that it contained certain rays which were not found in sunlight when it reached the earth, Dr. Blacker gave a description of light treatment abroad and emphasis was placed upon the difference to be observed between the action of light and heat rays, both of which had been proved, in his opinion, to be useful in treatment, either separately or in combination, but both if used indiscriminately produced harmful results. There were four methods of employing electricity in light treatment: (1) diffuse light; (2) heat and light combined; (3) intense light; and (4) concentrated light, the last-named method being associated with the name of Professor Finsen. A description was then given of the manner in which these different methods might be employed. In the diffuse light exposures the patient should be without clothes and the temperature should not rise above 98° F., and to commence with the duration of the exposure should not exceed 10 minutes, as it might produce great distress, and the maximum should be 30 minutes. The effects observed were slight increase in the pulse-rate, a rise of two or three degrees in the body temperature, irritability and excitement, which, however, soon passed off if the exposure were not too prolonged, followed by drowsiness, lassitude, and prostration, with fulness in the head. The respirations became fuller and deeper. When the exposure was too long and sudden sleeplessness might result, but when it was carefully regulated drowsiness and a refreshing sleep were produced, making it of value in insomnia. Heat and light in combination might be arranged in any desirable degree of intensity, rheumatic affections being without exception benefited by the addition of heat rays, and in cases of neuritis patients had only to try the addition of the proper proportion of light to appreciate the difference it made after having tried heat alone. The action of light was not passing, but it persisted for a long time after the exposures had been finished, and the effect in cases of overwork where a more complete change of environment could not be made was very marked. Of the various causes which received benefit from the action of light to the whole surface of the body none were more marked than those of exophthalmic goitre. Intense light was produced by the rays from an arc lamp of from 25 to 30 ampères and from 50 to 60 volts, the temperature required being regulated by the distance from the lamp; thus at a distance of 50 inches it was about 260° F., and at four yards about 75° F. This was the most satisfactory treatment for old rheumatic joints and all articular effusions. Emphasis was placed upon the great benefit derived by this particular form of light treatment in the relief of pain and neuralgic conditions generally. As regards treatment by concentrated light a description and demonstration of Professor Finsen's apparatus were given, also the method of the employment in the treatment of skin diseases, followed by an exhibition of cases so treated, with lantern slides.—A discussion followed.

CLINICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on April 16th, Mr. F. A. Southam, the President, being in the chair.—Dr. E. S. Yonge showed two cases in which he had recently performed Asch's Operation for Deflected Nasal Septum with good effects. Operations for deflected septum were frequently disappointing, and the favourable results of Asch's method were mainly attributable to the fact that the resiliency of the septum was destroyed before that structure was straightened.—Mr. E. Stanmore Bishop showed a case of Fibromyoma occurring in a Semi-cornuate Uterus (removed by Baer's operation). The patient was also shown.—In conjunction with Dr. R. A. Paton, Mr. Bishop also showed a large Fibrocystic Uterus, weighing 19 pounds, which was removed by total abdominal hysterectomy on March 20th with a successful result.—Dr. J. W. Stenhouse brought before the meeting several cases of Toxæmia. The first case was that of a primipara, aged 22 years, in which the main symptoms were mental. Towards the end of her pregnancy she began to exhibit mental symptoms, but two days after her confinement, which was perfectly normal, she became melancholic. With the accession of milk the melancholy deepened, and on the fifth day it gradually changed to mania and she died delirious on the eighth day. The pulse and temperature were normal till she became maniacal. Treatment had no effect. The second case was that of a married woman, aged 23 years, who passed through her first pregnancy without incident. In the sixth month of her second pregnancy she noticed that the skin on her chest and breasts became spotted with a reddish-brown discolouration. She aborted at the seventh month and the pigmentation disappeared. Three months after she became pregnant again and the discolouration reappeared and extended downwards like an inverted cone on to her abdomen. She felt ill and weak and had a brownish discharge. She aborted about the third month. The pigmentation became fainter, but at every menstrual period it became

much darker. It finally disappeared under the influence of arsenic. The third case was one in which the patient had convulsions at her first confinement. She had had two pregnancies since and each time albumin had appeared in the urine in the seventh month. Under treatment the pregnancies had terminated without incident. The fourth case was brought before the society last year. The specific gravity of the urine had remained persistently low, though the albumin had disappeared. The fifth case occurred in a primipara, aged 30 years. When first seen she was about eight months pregnant. The legs were œdematous, the face and hands were puffed, and she complained of headache, of pains and pricking, and of numbness in the extremities. The liver was slightly enlarged and very tender on pressure. The heart was normal. The specific gravity of the urine was 1008 and semi-solid with albumin. She was ordered to bed, put on a milk diet, and given calomel and salts. The urine was very slow in showing any change. In a fortnight the albumin was slightly less and the specific gravity was 1004. In the fortnight preceding the confinement it rapidly altered; the albumin got less and the specific gravity rose to from 1014 to 1018. The pregnancy terminated without incident and was instrumental. Four months after there was still some tenderness of the liver as well as a trace of albumin in the urine, and the specific gravity was 1016.—Dr. W. E. Fothergill opened the discussion, in which Dr. E. Vipont Brown, Dr. W. Graham, and Dr. A. Fraser took part.

Reviews and Notices of Books.

Diseases of the Heart: a Clinical Text-book for the Use of Students and Practitioners of Medicine. By EDMUND HENRY COLBECK, B.A., M.D. Cantab., &c. London: Methuen and Co. 1901. Pp. 350. Price 12*s.*

THE author of this work set himself the task of producing "a book dealing with the clinical side of the subject of heart disease in a form suitable to the requirements of the student and newly qualified practitioner of medicine." He has consequently entered very fully into the elementary anatomy, physiology, and methods of diagnosis of diseases of the heart before dealing in detail with the various affections themselves and their treatment. It seems part of the nature of a "text-book" that such matters should be considered *ab infero et imo*, and there is much scope for the exercise of judgment in executing such a task. The continual advance in the knowledge of anatomical and physiological details, as well as in other departments of such a study as that with which this book is concerned, renders it desirable that a well-sifted compendium of such knowledge should from time to time be made accessible. Such a work is particularly useful to the busy practitioner of medicine who has little time for, and not much opportunity of, keeping himself *au courant* with the researches of those who have more leisure for original investigation. In, view, also, of the amount and multifarious nature of the material which the student of to-day has to compress into his medical curriculum, such a digest is calculated to prove of service. It may be questioned, however, whether the student would not be better occupied in making his own, by reference to larger sources of information, much of the preliminary matter set forth in such special text-books as the present.

On such points opinions may legitimately differ. The author believes that such a work is calculated to be of service to both classes for which he writes, and we are glad to be able to state that in our opinion he has exercised all the judgment, care, and method necessary in the execution of his task to fulfil his purpose. He has avoided much "controversial matter" to gain "greater precision" in the exposition of the subject. In this he has no doubt been wise, for much of such matter is both crude and ephemeral. His description, however, of the sympathetic endowment of the heart appears to us to be scarcely consonant with present views on the subject. We are under the impression that the sympathetic outflow to the heart, at any rate in the higher mammals, has been fairly well established to be from the lower, not from the middle and upper, cervical ganglia. The diagrams given of the cardiac cycle are more elaborate than their prototype first employed by Sir William Gairdner, and the elaboration does not appear to us to be advantageous. On the other hand, the author's diagrammatic explanation of the arterial transformations in the fœtus, which appropriately precedes his consideration of congenital affections of the heart, is one of the simplest and best with which we are acquainted. These affections are somewhat fully treated by the author and we have nothing but praise both for the matter and the manner of his handling of the subject. The admitted difficulty in the precise diagnosis of some of these lesions constitutes it one of the still uncultivated fields of physical diagnostic exploration, and its fuller treatment in this book than in some larger treatises is calculated to stimulate the ingenuity both of students and practitioners. The author likewise gives more than a passing notice to lesions of the pulmonary valves, once designated the "region of romance," and in doing so chronicles an important advance in the knowledge of affections of the heart, for the physics of the dextral circulation differ considerably from those of the sinistral heart. Diseases of the left side of the heart are treated with the fulness and care which their frequency and importance demand, and the elements of their diagnosis and prognosis are considered with both judgment and perspicacity.

Special sections are devoted to the estimation of reflux and impeded afflux in regurgitant and obstructive lesions, an emphasising of these points which is of theoretic interest and practical importance. The author mentions a fact which is frequently ignored—namely, that although the character of the bruit may have no fixed relation to the amount of lesion, it is important as an index to ventricular force. When, however, he states, in discussing mitral incompetence (p. 179) that the total obscuration of the first sound by bruit and its conduction in the recognised direction may be taken to indicate that the "amount of regurgitation is very considerable," we do not think sufficient weight is given to the fact that the *loudness* of the bruit may obscure the first sound at its site of maximum intensity, without its being necessarily an index to the amount of regurgitation. A chapter is specially devoted to the consideration of angina pectoris, a subject which has exercised a fascination for many writers on cardiac pathology and therapeutics, and the reader will find here a short yet good *résumé* of present knowledge on this important affection, the essential nature of which is still somewhat mysterious. The book closes with observations on the Nature and Treatment of Functional Disorders of the Heart. Bearing in mind the avowed object which the author had in collecting and weighing his material we can congratulate him on having effected his purpose in a manner which should prove satisfactory and helpful to the majority of his readers. Modest as is the aim of the book, we consider that Dr. Colbeck has produced a work of more intrinsic value than some more pretentious volumes.

Die Lepra. By Dr. VICTOR BABES. Vol. XXIV. of Professor Nothnagel's Special Pathology and Therapeutics. Vienna: Alfred Hölder. 1901. Pp. 350. Illustrated. Price 10 marks 60 pfennigs.

THE volume under review constitutes one of the latest additions to Professor Nothnagel's System of Special Pathology and Therapeutics, and probably there is no authority in Europe better entitled to undertake this particular section than Dr. Victor Babes, whose name is a familiar one in the

literature of the subject. In Roumania, where his researches have for the most part been conducted, leprosy is by no means uncommon, so that he has had the advantage of clinical experience as well as having had ample pathological material from which to draw his conclusions.

Dr. Babes has freely availed himself of the great mass of evidence collected from all parts of the world and published in the somewhat chaotic reports of the Berlin Conference of 1897. The knowledge thus acquired he has summarised in a most masterly manner and combined with the results of his own experience. He has completed a work on leprosy which may be regarded as the standard work on the subject. The history of the disease and its geographical distribution are dealt with in the first and second chapters. Then follow those on the etiology, pathology, symptomatology, diagnosis, and treatment. The pathology of the disease may be said to date from the discovery of the bacillus by Neisser in 1897, for to this investigator and not to Hansen the author gives the credit of the discovery. Hansen, working under the disadvantage of unstained preparations, was too indefinite in his descriptions to rank as the real discoverer. Considerable space is devoted to the methods by which the disease may be propagated and the question of hereditary transmission. The long incubation period necessary for the full parasitic development of the bacillus is a serious obstacle to experimental inoculation and renders it difficult to learn definitely by what path or paths the bacillus enters the human system. The author believes that though hereditary transmission may occasionally take place, as a general rule it plays but a small part in the spread of the disease. That leprosy partakes of the nature of a family disease, in the sense that all the members of a family may be infected, the author regards as admitting of no doubt; but since it frequently happens that the offspring show symptoms before the parents it is difficult to prove that in any particular case the children have acquired from the parents either a predisposition to the disease or the disease in an hereditary form. As regards treatment, Dr. Babes has faith in the eventual discovery of a specific serum; in the meanwhile, he claims advantage for his anti-tuberculous and anti-diphtheritic methods. He believes that we shall overcome the difficulties of understanding the true nature of the disease by studying the bacillus in its exogenous or saprophytic form rather than by confining our attention to it as a parasite in the human body. He suggests that it may possess a very complicated cycle of development, possibly in plants, manure, and fishes. The life-history of the bacilli of tubercle, diphtheria, and leprosy presents analogies and similarities which Dr. Babes evidently regards as of extreme interest and importance. It is to be hoped that this admirable work will be translated into English for the benefit specially of those of our colonial brethren who cannot read with facility the technical writings of a German *savant*.

Hygiene and Public Health. By LOUIS C. PARKES, M.D., D.P.H. Lond., and HENRY R. KENWOOD, M.B. Edin., D.P.H., F.C.S. London: H. K. Lewis. 1901. Price 12*s*.

THIS work, which consists of 732 pages, is practically an expansion of "Hygiene and Public Health," by Dr. Louis Parkes, which was published in 1889 and which has since run through five editions. Dr. Kenwood has now joined Dr. Parkes in authorship and the result is a considerable expansion both in the size and scope of the original volume. In a book of this nature the reader naturally turns to the subjects upon which the advance of science has recently thrown most light or concerning which the legislature has added to the statutes—such, for instance, as the purification of sewage, the natural history of infectious disease, and disinfection. In all these particulars the book before us has been brought well up to date, and the present position of our knowledge is set forth in a very readable fashion. The character of the several chapters varies somewhat—that upon water being excellent, while that upon meteorology is, in our view, a little too much expanded for the general character of the book. In other cases there might have been more concentration, but as a matter of fact the student, for whom of course the book is largely intended, does not like his information too much boiled down. The last chapter deals with sanitary law and administration, and although the space given to this subject is small the matter is well arranged. We notice, however, that under the heading of "Rivers Pollution" the administration of the Rivers Pollution Act is somewhat insufficiently set forth. The sanction of the Local Government Board is, we think, only necessary under Part III. of the Act, and not under the whole Act, as is implied. Some mention, too, should have been made of the powers of county councils under this heading. The book will not only serve the student's purpose but it will form a useful focus of our present knowledge for the medical officer of health. A wholesome scientific spirit pervades the work.

Uterine Tumours, their Pathology and Treatment. By W. ROGER WILLIAMS, F.R.C.S. Eng. With 58 Illustrations. Demy 8vo. London: Baillière, Tindall, and Cox. 1901. Pp. xvi.–360. Price 10*s*. 6*d*. net.

IN his preface to this book Mr. Roger Williams quotes Buckle as saying, with reference to medical literature: "We are in the predicament that our facts have outstripped our knowledge, and are now encumbering our march." That this is so is without question. In an endeavour to restore some order to the chaotic mass of facts known to us with regard to uterine tumours the author has written this monograph. The close attention that Mr. Roger Williams has given to this subject renders him well fitted to attempt such a task. The greater part of the book is, of course, taken up with myomata and carcinomata of the uterus. Amongst some of the most interesting chapters and sections are those upon the Pathogenesis of Myomata, their Biology, the Question of the Origin of Malignant from Myomatous Tumours, and the Radical Treatment of Myomata.

With regard to the origin of these tumours the conclusion is come to that it is connected with abnormal development of the musculature, detached fragments of which—grouped round heterotopic epithelial "rests"—are the germs whence they arise.

The author clearly shows that far from myomata having any special proclivity to become cancerous they are very much less liable to originate this disease than are the glandular elements of the uterus itself, while from the data collected it is evident that such tumours seldom become sarcomatous. These conclusions are of great value in view of the statement that is so often made that uterine myomata tend to become malignant. In reference to their etiology the great importance to be laid upon the suppression of maternity and diminution of the natural fertility is clearly shown. Grave exception has been taken to Mr. Roger Williams's statement that "if the practice of some surgeons—in removing myomata whenever recognisable—were generally followed nearly 1,000,000 operations of this kind might be done in a single year, and as the average mortality from such operations may be estimated at about 10 per cent. this means that about 100,000 lives would be sacrificed in a single year." That the mortality of such operations would probably be much less than 10 per cent. and that such a statement is an exaggerated one is no doubt true, yet it well tends to show how great a responsibility lies with those who lightly recommend operation for a condition the

normal mortality from which may be regarded as about 1 in 2000 cases. We should be better able to come to a decision upon this most important matter if those surgeons who operate upon large numbers of fibromyomata would state clearly and definitely in every case what were the indications for operation.

The second part of the book is concerned with Malignant Tumours of the Uterus. Mr. Roger Williams's views upon the etiology of cancer are of much interest. He has collected a large amount of evidence tending to prove Moore's statement "that cancer is eminently a disease of persons whose previous life has been healthy and whose nutritive vigour gives them otherwise a prospect of long life." From the considerations brought forward he concludes that the disease is prevalent mainly amongst the well-to-do and easy-going who habitually eat more than is good for them. An observation of much importance is that of 137 patients under observation with cancer of the uterus only 13 had suffered from previous disease of that organ—viz., leucorrhœa, seven; prolapse, three; and endometritis, three.

There are many other interesting observations for the consideration of which we must refer our readers to the book itself. The amount of material dealt with is enormous, including as it does not only the author's own experience but also a large number of references to foreign literature. We can cordially congratulate Mr. Roger Williams upon the production of an eminently readable book and one which will probably long remain as the best monograph upon the subject.

LIBRARY TABLE.

Electro-Hæmostasis in Operative Surgery. By ALEXANDER J. C. SKENE, M.D. London: Henry Kimpton. 1901. Pp. 180. Price 10*s.* 6*d.* net.—We learn from Dr. Skene's preface that this work was issued to supplement the third edition of his book on diseases of women. The greater part of it therefore deals with gynæcological surgery. At the outset we may remark that we think that the title is badly chosen. The hæmostatic agent is not electricity but heat, albeit the source of heat is electricity. Dr. Skene's method is, in fact, an adaptation, and a very useful one, of the ordinary cautery. The advantages of the electrical cautery are, of course, that the instrument can be placed in position when cold, that the degree of heat can be exactly regulated, and that the heat can be practically instantaneously cut off. The vessels are not burned but simply cooked—that is to say, their albuminous constituents are coagulated and the walls are fused together. Dr. Skene gives a detailed account of the use of this method in various operations, and the book concludes with two chapters upon Asepsis and Antisepsis. Altogether a study of the cases cited by Dr. Skene shows the great superiority of this method of hæmostasis over ligatures, however carefully sterilised these latter may be.

Appendix XIV. to the Second Edition of the Descriptive Catalogue of the Pathological Specimens contained in the Museum of the Royal College of Surgeons of England. By SAMUEL G. SHATTOCK, Pathological Curator of the Museum. London: Printed and sold for the College by Taylor and Francis. 1900. Pp. 56.—This appendix contains descriptions of the pathological specimens added to the Museum during the year ending July 1st, 1900. As might be expected, a number of the specimens deal with gunshot wounds and the missiles inflicting them. A very interesting and uncommon specimen is shown in Number 599A, which illustrates the conditions found in the right forearm and hand of a chimpanzee. The tendons of the flexor profundus digitorum were ruptured near their insertion into the terminal phalanges. The tendon of the index was tied in a knot around the unruptured tendon of the flexor sublimis, after having been withdrawn completely through the slit in the latter.

La Mécanothérapie. Par le Dr. L. R. REGNIER. (*Mechanotherapy.* By Dr. L. R. REGNIER.) Paris: J. B. Baillière et Fils. 1901. Pp. 92. Price 1 franc 50 centimes.—This little book forms one of a series entitled "Les Actualités Medicales," and to give it its extended title is an account of the application of movement to the cure of diseases. Dr. Regnier is the physician in charge of the electrical department at the Charity Hospital in Paris and probably, therefore, has a wide experience of that class of patients which includes those obviously suffering from something but who present no very definite symptoms. Such patients, be they "neurasthenic" or not, generally end up in the electrical department and without doubt get great relief from properly carried out exercises and massage. In addition to such cases those patients suffering from disorders of nutrition, commencing lateral curvature, and certain forms of morbus cordis are undoubtedly greatly benefited by exercises. Dr. Regnier gives a clear account of the various apparatus and exercises and the methods of applying them. Any practitioner wishing to make himself acquainted with mechanotherapeutics will be enlightened by a study of the book now before us.

Science and Mediæval Thought. By THOMAS CLIFFORD ALLBUTT, M.A., M.D. Cantab. London: Q. J. Clay and Sons. 1901. Pp. 116. Price 2*s.* 6*d.* net.—This is a reprint of the Harveian Oration delivered before the Royal College of Physicians of London on St. Luke's Day, Oct. 18th, 1900, and of which an abstract appeared in THE LANCET of Oct. 27th, 1900, p. 1179. It is a scholarly and learned review of some aspects of mediæval thought and of the influences which withstood Harvey in his works, in his discoveries, and in the acceptation of them. Arid and erroneous as in many ways was mediæval philosophical thought, yet, as Professor Clifford Allbutt finely says in his introduction, "Their many errors came not of indolence, for they were passionate; not of hatred of light, for they were eager for the light; not of fickleness, for they wrought with unparalleled devotion; nor, indeed, of ignorance of particular things, for they knew many things; they erred because they did not know, and they could not know, the conditions of the problems which..... they were nevertheless bound to attack." The dread of change was one great obstacle in Harvey's way, and yet from the discussions and the troublings of mediæval minds seeking the truth and believing that they had found it was possibly bred that cast of mind which, in the bodies of Galileo, of Copernicus, of Kepler, and of Harvey, gave rise to those discoveries which revolutionised the conceptions hitherto held of the universe and of the many problems connected with life.

The Annual Charities Register and Digest for 1901. With an introduction by C. S. LOCH. London: Longmans, Green, and Co.—The current issue of this invaluable work gives a succinct account of every "charity" worthy of the name and of some among the "spiritual institutions" which, in our opinion, have no right to the name. Mr. C. S. Loch of the Charity Organisation Society contributes a most interesting introduction and the value of the book is further enhanced by an elaborate index. Ill-given alms are capable of doing incalculable harm, but a consultation of this book should go far in helping the almsgiver to distribute his charity with reason.

How to Read the Money Article. By C. DUGUID. Second edition. London: Effingham Wilson. 1901. Pp. 138. Price 2*s.* 6*d.*—This is a very useful little book, and when the author says that any city editor could easily have written it he makes too light of his accomplishment. Doubtless no one could fill the post of a city editor who had not at his finger's ends the information given in Mr. Duguid's pages, but it is

not everybody who knows a technical subject well that can impart his knowledge well. On the contrary, fulness of knowledge is sometimes apt to lead to loss of proportion in the presentation of different points, to obscurity where the writer assumes in his readers too much knowledge, and to weariness where the writer, taking an exactly opposite course, considers it his duty to instruct his audience on matters of common elementary experience. These various pitfalls are neatly avoided by Mr. Duguid who in teaching us to understand the money article of the daily press incidentally gives the ordinary investor much valuable information. There has been a great growth in the number of companies of recent years and this extension of the limited liability system to all sorts of concerns has been enormously increased by what Mr. Duguid calls "the apotheosis of the one-pound share." Amateur financiers have now become so numerous in the land that we are sure many of our readers must be among their body. If they intend to watch over their own pecuniary interests they ought to know the lessons of this little book, but they must understand that ability to read the money article with intelligence will not make it prudent for them to embark upon investment without expert advice.

JOURNALS AND MAGAZINES.

La Grèce Médicale.—The opening article of the March number is by Dr. Raynardt of Paris and is a biographical sketch of Dr. John A. Foustanos of Syra, the editor. Dr. Foustanos was born in Sparta in 1856 and took a medical degree at Athens in 1881, after which he served for a year as a medic officer in the Greek army, and then passed three years in medical study in Paris. On returning to Greece he settled in practice in Syra, became the correspondent of the Paris *Semaine Médicale*, was appointed director of the pathological department of the hospital, and wrote treatises on hypnotism and on new remedies, as well as a number of clinical reports of cases. His chief work, however, was the founding of two monthly medical journals, the only medical journals at present existing in Greece—namely, Ἰατρικὴ Πρόοδος (*Progrès Médical*), published in the Greek language, and *La Grèce Médicale*, published in French. In THE LANCET of August 11th, 1900, p. 454, we mentioned that Dr. Foustanos took part in the International Congress of the Medical Press held in Paris, and THE LANCET of Oct. 6th, 1900, p. 1047, contained a short history of medical journalism in Greece since the year 1836. The biography of Dr. Foustanos is illustrated with a portrait in which he is shown wearing the decoration of the Order of the Saviour conferred on him by the Greek Government.

Praeco Latinus.—Although not in any way relating to medicine, this monthly serial of 32 pages, the size of which is a little smaller than those of THE LANCET, deserves notice as a curiosity in journalism. Not the title only, but the whole of the contents, are in Latin and on the covers there are full-page advertisements of an American firm of tool-makers, a nail-maker, a hatter, and the Hammond typewriter all in the same language. Among the various articles in the January number may be mentioned a poem by the Pope, an instalment of a translation of Silvio Pellico's well-known work "Le mie Prigioni," and a description of Admiral Dewey's reception on his return from the war with Spain; there are also correspondence columns. Many might feel a certain amount of interest in a periodical of this kind. *Praeco Latinus* is copiously illustrated, chiefly with views in Rome, the frontispiece being a fine portrait of the Pope. All communications are to be sent to Letter Box 223, Philadelphia, U.S. of America. The annual subscription for countries other than America is $1.74, or 6*s.* 10*d.*

Analytical Records
FROM
THE LANCET LABORATORY.

TABLOIDS: (1) SODIUM BISULPHATE; (2) BENZOIC ACID COMPOUND; AND (3) ERGOTIN.

(BURROUGHS, WELLCOME, AND CO., SNOW-HILL BUILDINGS, LONDON, E.C.)

THE tabloid of sodium bisulphate is the outcome of the suggestion that this salt may be used for sterilising water infected with the enteric bacillus. A paper on this subject by Dr. L. C. Parkes and Dr. S. Rideal, F.I.C., appeared in THE LANCET of Jan. 26th, 1901, p. 234. It appears that a solution of sodium bisulphate in the proportion of one gramme of the salt to a pint of water is capable of destroying the typhoid bacillus after 15 minutes' contact. Water containing this small proportion of the salt does not appear to be unpalatable whilst possessing a slightly acidulous taste. The convenience of the tabloid for this purpose is obvious. Three tabloids are sufficient for one pint of water. The effect, however, of regularly taking this salt has not yet been completely ascertained. Doubtless the laxative effect would be slight, but it is maintained by some that the sulphates in plastered wines are responsible for cirrhosis. This, however, in our opinion is not probable. Each tabloid contains five grains of the acid salt. The tabloid benzoic acid compound is based upon the following excellent formula: benzoic acid, half a grain; codeine, one-tenth of a grain; menthol, one-tenth of a grain; powdered ipecacuanha, one-tenth of a grain; cocaine hydrochloride, one-fortieth of a grain; and of red gum a sufficiency. A glance at this formula will show that the tabloid possesses expectorant properties and may act locally as a mild anæsthetic and astringent. The ergotin tabloid contains one grain of the hæmostatic principle. The tabloid is sugar-coated and is prepared from a reliable extract of known therapeutic efficiency.

GLOBINAL.

(F. WILLIAMS AND CO., 83, UPPER THAMES-STREET, LONDON, E.C., AND WILCOX, JOZEAU, AND CO., 48, HAYMARKET, S.W.)

Globinal is described as a natural albuminate of iron and our analysis confirms the description. The substance is contained in capsules in the form of reddish-black scales which are easily soluble in cold water, yielding a blood-red solution. The solution shows two absorption bands when examined by the spectroscope identical with hæmoglobin. Our analysis was as follows: mineral matter, 2·90 per cent., containing 0·25 per cent. iron, the balance being due to other blood salts; albumin, 83·70 per cent.; and moisture, 13·40 per cent. Globinal may therefore be regarded as a highly nutritive hæmatinic. Albuminate of iron is without the drawbacks of ordinary iron preparations and does not affect the teeth or give rise to constipation. Its administration improves the powers of nutrition and thus globinal has been administered favourably in neurasthenia, anæmia, and chlorosis.

SYRUP OF GLYCEROPHOSPHATES.

(WYLEY'S, LIMITED, COVENTRY.)

This is a somewhat brilliantly-coloured syrup with characteristic saline taste. The glycerophosphates are contained in the fluid unimpaired and are permanent on account of the concentrated state of the syrup. Each fluid drachm contains three grains of the combined dry glycerophosphates of lime, soda, potassium, iron, and magnesia. As is well known, the administration of the glycerophosphates has given favourable results in disorders of the processes of nutrition. The fact that lecithin, which is contained in the nervous tissues and blood corpuscles, splits up into choline and glycerophosphoric acid during digestion has suggested the administration of glycerophosphates in nervous diseases.

THE LANCET.

LONDON: SATURDAY, MAY 4, 1901.

The Home Office and Medical Witnesses' Fees.

THE reply of Mr. RITCHIE to the question put to him recently in the House of Commons by Mr. W. F. LAWRENCE, Member of Parliament for the Abercromby division of Liverpool, with regard to the fees of medical witnesses, has intensified the feeling of dissatisfaction among members of the medical profession. Mr. RITCHIE practically admitted that medical witnesses in England and Wales were remunerated at a lower scale than their brethren in Scotland or Ireland. However, he not only held out no intention of attempting to remedy so substantial a grievance, but declined to make inquiry. He adopted, in fact, the attitude of most of his predecessors in office, especially Sir MATTHEW WHITE RIDLEY and Mr. ASQUITH. The latter gentleman admitted to a deputation from the United Kingdom Police Surgeons' Association that the fees were inadequate and that his predecessors had allowed the same, but that not one had liked to raise the scale and that he had no wish to burn his fingers by doing so. It is contrary to reason and justice that the members of the medical profession, any one of whom is liable to be called as a witness in a court of law, should remain passive under such a long-standing grievance. In dealing with the matter again at some length we know that we must be recapitulating what has already appeared in former articles, but we have no objection to repeating ourselves if good will come of it.

Medical practitioners have in many cases been summoned before magistrates to give evidence in cases which have been disposed of summarily, and on demanding a fee for their attendance and loss of time have been calmly informed by the presiding magistrate that there are no funds at his disposal for the purpose. In some large towns a fee of half a guinea is allowed in such cases, but only for one attendance. This, we submit, constitutes in itself a grievance which demands an inquiry. Passing on to those cases which go to a higher court and may for convenience be called "committal cases" the scale of fees is that fixed in 1858. Under this scale a fee of half a guinea per diem is allowed for attendance in the police-court, these fees being payable after the conclusion of the trial at sessions or assizes. So far from being a just or adequate fee its offer is an insult to the medical profession. In the sessions and the assizes courts the fee is one guinea each day, a very insufficient sum for being present all day in court, even if the medical witness happens to reside in the city or town where the assizes or sessions are held. Should he be required to proceed to a court of sessions or an assize court held at a distance he receives the same fee with railway fare each way and an allowance of 2*s.* per night. Formerly first-class railway fares were allowed; now we learn that only second-class, and even third-class, fares are given. It requires some effort to think and to write calmly on this point, especially when the reason why the medical witness has been drawn into the case at all is considered. Most probably he has been hastily called to a person seriously injured or suffering from symptoms of poisoning in which his prompt attendance is dictated by feelings of humanity regardless of any question of fee. Once in attendance he becomes a witness of facts to which he is required to testify before the coroner and the magistrate. By both these officials he is bound over in a heavy recognisance which compels him to be present at the assizes, leaving all questions of remuneration to the powers that be. Again, the medical witness may have been called to see a dead body, found under suspicious circumstances. This must not and cannot be a mere perfunctory duty (though it is too often an unpaid one), since, as the late Lord DEAS, one of the Scotch judges, observed, a medical man when he sees a dead body should notice everything. Or it may be a case of criminal assault on a female or one of unnatural offence—cases as uninviting as any professional witness can be called to. In all these cases the medical witness must leave his patients in charge of a locum-tenent or brother practitioner and proceed to the *locale* of the assizes, being detained there for some days or it may be for a week. After receiving the fee of one guinea per day and the second- or third-class railway fare and the allowance of 2*s.* per night, he finds himself on his return home, and having paid his locum-tenent, not only without any remuneration at all, but out of pocket to a considerable extent. For it is manifest that the allowance of 2*s.* per night will not suffice to pay a hotel bill, this must be paid out of the one guinea per day which is supposed to remunerate the medical witness for his attendance. These facts—for facts they are of the most stubborn character—demand a Government inquiry, and if this were held it would be shown that so far from the grievances of the medical witness having been overstated they have been expressed with moderation.

Sir GEORGE GREY fixed the present scale in 1858. In 1862, just four years later, the case of REG. *v.* CHARLTON was tried at Carlisle. It was a case of murder, the deceased woman having been murdered under circumstances of great brutality by an engine-driver who was not arrested until a month afterwards. The evidence was circumstantial and the medical evidence formed a very important part of it. The late Mr. WILLIAM BOUSFIELD PAGE, the leading surgeon of Carlisle and the principal medical witness, demanded the sum of 12 guineas for his two days' attendance in court. On its being refused he appealed to the presiding judge, the late Mr. Justice WILLES, who promptly ordered it to be paid. The learned judge's decision was probably stiffened, if not prompted, by what had previously occurred at the commencement of the trial. The prosecuting counsel for the Crown had complained that the costs of the prosecution had been so cut down that he had been unable to have a plan of the scene of the murder and had been obliged to accept one prepared for the defence. The learned judge severely rebuked this cutting-down process and on the official responsible for it rising in court and stating that

the costs of plans were always allowed when necessary he was promptly silenced. "I beg your pardon," replied Mr. Justice WILLES, "in a case recently tried by my brother BYLES the costs of a plan were disallowed although he ordered it to be prepared himself." It is to the point and suggestive in conjunction with this to notice Mr. RITCHIE'S answer to Mr. LAWRENCE that any increase of medical witnesses' fees would lead to a great increase of the costs of prosecution. What does that matter? Why should not the truth be properly paid for?

In addition to the grievances of attendance at police, sessions, and assize courts for inadequate remuneration there is growing cause of complaint of the low fees paid for attendance at coroners' courts. Nor can it be surprising, for if the scale fixed in 1858 be insufficient, what must be said of that fixed in 1836 for the coroners' court and re-enacted in 1887 without any amendment and, so far as we can learn, without any protest from any Member, medical or lay, of the House of Commons? Is there no difference between the value of a guinea in 1836 and now? Is one guinea a reasonable fee for making post-mortem examinations and one guinea sufficient for attending an inquest twice, or it may be three times? The cry for reform all round in the matter of the remuneration of medical witnesses is outspoken. Will the present Government grant the very reasonable request that medical practitioners shall not be compelled to aid justice at a pecuniary cost to themselves? Will they refrain from discouraging the practice of medical jurisprudence by general practitioners of the present day? It is not only possible, but probable, that if the present obdurate attitude of the Home Office be not relaxed justice may in the near future be very seriously compromised.

The Medical Profession and the Budget.

MEDICAL men are not as a rule particularly interested in party politics, nor is it the function of a medical journal to join in the strife of contending statesmen. Medical men, however, are not exempt from the payment of taxes and are as directly concerned in the incidence of these imposts as are their fellow-citizens. It is fitting, therefore, that we should consider what the effects on the medical profession will be of the Budget proposals now before the House of Commons. It is our opinion that these proposals will press very hardly on medical men at a time when the profession can ill bear the strain. The fees which they obtain as the result of their intellectual work have not been increased, although during the last few years the cost of living has in many directions been raised and the cost of scientific education has been doubled. Hard-working general practitioners pay to the revenue an amount disproportionately large as compared with that paid by most other classes of the community, while they receive from the Government the scantiest recognition—almost no help—in their efforts to preserve the health of the people and to maintain a high standard of efficiency.

It unfortunately happens that many of the patients from whom our readers who are in general practice might expect to receive the bulk of their incomes are affected in the same way as the medical practitioners are affected by an increase in the income-tax, a tax which, as a matter of fact, is felt by the intellectually labouring classes and the lower middle classes more than by any other section of the community. The people who were once termed "the industrious classes," and whose present representatives are still called "the labouring classes," do not under the present conditions of life contribute their just proportion to the national exchequer. They are exempt from any payment of the income-tax, as a rule they pay nothing whatever for the education of their children, and they usually obtain medical treatment and medicine at no cost to themselves or at such a cost that th medical profession has had to object to the starvation terms offered to requite its services. To the rich the increase in the income-tax is an annoyance, but it is one which can be borne without any great measure of discomfort. We fear, however, that in the case of very many people with small incomes the increase will be a real hardship. We are convinced, by the way, from correspondence that we have received, that many medical practitioners at present pay income-tax on a larger amount than they need. Many men, especially those who live in the country, have a great objection to deal fully with their private business matters in a return which has to be sent to somebody who lives near and whose complete discretion they mistrust. To admit a decrease in their annual takings, they rightly or wrongly feel, would be dangerous, for the fact might leak out to their damage, and so they accept year after year a too high assessment. Again, like many other people, medical men we know frequently neglect to fill up the statutory declaration in regard to their incomes and are content to have the amounts assessed for them. This state of things often goes on year after year till the assessor increases the sum to be paid to an unreasonable amount. The trouble and the expense of an appeal are at length considered, though the consideration stage is as far as matters generally get. A careless or a busy man often pays more income-tax than he ought, partly because of the trouble unavoidably entailed in getting the matter righted and partly in some cases because he objects "to plead poverty"—as he explains the matter to himself. Doubtless much annoyance is necessarily caused when a gossip has charge of the collection of the income-tax, but it is our opinion that this is not common and that for the most part apprehension is groundless. Medical men would do well, when they object to their assessment and when they fear a leakage of their private affairs if they remonstrate with the local official, to apply to have their assessments made by the Special Commissioners under the provisions made for that purpose. A little trouble may at first be caused by this method of proceeding, but in the long run annoyance will be saved.

Even when medical men take the trouble to make their returns we know that many in estimating their net incomes do so in a way which is very favourable to the Inland Revenue. A shopkeeper looks upon the rent of his business premises as part of his necessary trade expenses. In like manner it is a necessary part of the trade expenses of a medical man to rent his house, or at any rate his surgery. If his surgery is separate from his house he pays no income-tax upon the rent of it. If his house is also

his business address he pays no income-tax on two-thirds of the rent. Do all medical practitioners in estimating their taxable income take this matter into account? We know they do not, for we have had returns submitted to us where the error of making no allowances for rent had occurred. A shopkeeper who delivers goods rightly looks upon the cost of his carts and horses and carmen as part of the expenses of his business. Many medical practitioners who keep horses, carriages, and grooms to enable them to visit their patients do not keep proper accounts by which they can show which of the expenses thus entailed are absolutely necessary to their business inasmuch as without them the practice could not be carried on. They have only themselves to thank if they pay more than a fair contribution to the national chest.

The Prospects of Plague in London.

THE occurrence last week of a suspected case of plague in London serves to remind us that the year may not pass away without the appearance of this disease in the London population. Plague has already been ship-borne to several English ports, and the appearance of the disease in the Cape, where Europeans as well as natives are being attacked, makes it probable that there will be further importations. It is hardly to be expected that the vigilance of the port sanitary authorities will suffice to prevent attacks of persons resident in this country, while the free communication between London and South Africa makes the invasion of the metropolis a likely event.

The recent case is not, we understand, officially regarded as plague, but under the circumstances attention may reasonably be directed to the question whether the prevalence of plague, if it should come among us, will attain large proportions or whether it will be limited to localised outbreaks of inconsiderable importance. We think that there are ample reasons for believing that there will be no general prevalence and that the efficient performance of duty by the local authorities concerned will suffice to prevent any epidemic of magnitude. This opinion is necessarily based upon the past history of the disease. We read of its behaviour in London in the middle of the seventeenth century, when in some six months a large proportion of the population perished; we know the extent of its operations in recent years in India and other countries; and the lesson taught by the experience of 1665 accords with that derived from observations of the behaviour of the disease as it has revealed itself in many Oriental cities in our own time. Plague is a disease manifesting an enormous power to attack persons living in conditions of filth and degradation, but possessing limited power to attack persons living under the better and cleaner conditions of the twentieth century. In India it has been practically limited to the native population, and in Glasgow it was last year limited to the lowest class of the population. In London we may expect that it will observe much the same rule. If explanation is required for its large diffusion in 1665 it is no doubt to be found in the character of the population of London at that time and 20 years later, when, as MACAULAY tells us, "the pavement was detestable; all foreigners cried shame upon it. The drainage was so bad that in rainy weather the gutters soon became torrents. Several facetious poets have commemorated the fury with which these black rivulets roared down Snow-hill and Ludgate-hill, bearing to the Fleet Ditch a vast tribute of animal and vegetable filth from the stalls of butchers and greengrocers." The rich lived in luxury, but they were comparatively few in number and they were in intimate association with the crowds of poor and uncivilised people who made up the mass of the population. St. James's-square, occupied by wealthy peers, "was a receptacle for all the offal and cinders, for all the dead cats and dead dogs of Westminster." The conditions which now are seen to foster plague in Eastern countries were then everywhere present in London. These conditions have passed away. London still has its slums, but the worst have gone and only in small proportions is a population to be found comparable to that which made up the mass of the people in 1665. It is a somewhat striking fact that the London County Council is now engaged in the clearance of the Clare Market area which was the abode of fashionable people in the time of the Great Plague. Conditions involving want of air and light, bad arrangement of the houses and streets which were then deemed adequate for the well-to-do are not now regarded as fit for the poorest of the population of modern London.

This vast change which has come over the metropolis gives us an assurance of security which is the more reliable because we see in our own time that plague is able in the East to distinguish between the native and European races—the natives living under conditions which approximate to those of London in 1665 and the Europeans under conditions which resemble those of London at the present time. The extent to which plague may become prevalent in London will undoubtedly depend in some degree on the character which the disease assumes. In this connexion it is deserving of note that plague in the year 1625 was much less destructive of human life than in 1665, although if any difference existed between the conditions of London in those two years it is probable that those of the earlier year were worse. We have, however, now to reckon on an improved sanitary organisation, and this for the purposes of plague is fairly complete. Precautionary measures against plague have been very properly taken by the London County Council in conjunction with the Metropolitan Asylums Board. The measures suggested by the Public Health Committee of the Council were adopted at a meeting of the Council held on Tuesday last, April 30th. Every medical practitioner can now on application have from the London County Council the services of an expert to assist him in the diagnosis of any case presenting suspicious symptoms. Material from such cases will be subjected to precise bacteriological examination. Suspected as well as actual cases of plague will, on the certificate of the London County Council's expert, be isolated by the Metropolitan Asylums Board, and the Council will itself provide isolation houses for persons who have been exposed to plague, where they will be under medical inspection until such time as it can be determined that they have not been infected. The investigations by the officers of the local sanitary authorities and the disinfection and destruction of infected articles should suffice to prevent

an infected house becoming a source of further danger to the community. Interest will undoubtedly be felt in the increasing prevalence of plague at the Cape, and especially in the larger proportions of Europeans who have been attacked. It is probable that we shall learn later whether the cases have been of the pneumonic variety in larger proportion than in India. Should this form of disease make its appearance in England it will call for active treatment by the local authorities.

Annotations.

"Ne quid nimis."

MEDICAL OFFICER OF HEALTH AND PUBLIC ANALYST.

WE have consistently maintained that the posts of medical officer of health and public analyst in large districts or in the metropolitan boroughs should not be combined in the same person. The science and practice of sanitation are in themselves quite sufficient to occupy all the time of a medical officer who discharges his duties efficiently, in which case he would be prevented, in our opinion, from giving that systematic attention to laboratory work which is essential to the performance of the duties of a public analyst. Though we know that there are competent officers who combine both posts, yet we are convinced that the best work in both departments cannot, as a rule, be combined in the same person. The duties of a public analyst are very different from what they used to be: they demand much more of his time, greater skill, and more attention. The art of adulteration is more consummate than ever, and the public analyst must be more consummate than ever in order to detect adulteration; the medical officer of health cannot reasonably be expected to keep pace with modern methods of detecting fraud. Again, the number of samples hitherto taken under the Sale of Food and Drugs Act has been grossly inadequate—a fact which, as we have repeatedly shown, has done more than anything to maintain a high rate of adulteration. The duties of the medical officer of health should engage his time and attention to such an extent that to examine efficiently, say, 500 samples a year would be an impossibility. We do not think, therefore, that the municipal bodies are well advised in combining the appointments of medical officer of health and public analyst. Such a combination is not for the public advantage. We were glad to learn that the Corporation of the City of London—though, we believe, under representations from the Local Government Board—decided on the death of the late Dr. Sedgwick Saunders, who was both the medical officer of health and the public analyst of the City of London, to separate the posts and to appoint two distinct persons. It has recently been disclosed that only 135 samples per annum were taken for analysis in the City of London—a number which was probably as much as the medical officer of health could examine in the time at his disposal. We trust that now a public analyst has been appointed separately the number of samples will be at least four times as much—or at any rate in accordance with the recommendation that at least one sample should be taken per 1000 of the population—and that the Local Government Board will press upon the corporation the desirability of taking an adequate number of samples. We feel sure that those authorities who have already decided to combine the posts of medical officer of health and public analyst in one person will ultimately find that they have established a wrong precedent—not because the medical officer is incompetent to make analyses, but because he has not the time to give to the analysis of food and drugs that specific attention which is desirable. As a rule, the duties of a medical officer of health are quite onerous enough in regard to sanitation without the additional burden of having to undertake the analysis of some hundreds of samples per annum of foods and drugs. Both departments, it seems to us, cannot be conducted by one person with that efficiency which in the public interest is desirable. Moreover, the best results are sure to be gained by two independent men, each with his special knowledge, acting in coöperation. The example of the City of London in separating the offices of medical officer of health and public analyst should be followed in all large districts, but that this is not to be the rule will appear from the following extracts from two advertisements which have appeared in the papers during the last few weeks.

Metropolitan Borough of Lewisham.—APPOINTMENT of MEDICAL OFFICER of HEALTH and PUBLIC ANALYST.—Public Health (London) Act, 1891, and Sale of Food and Drugs Acts, 1875 to 1899.—Notice is hereby given that the Council of the Metropolitan Borough of Lewisham will, at their meeting on Wednesday, the 22nd May, 1901 (or at such adjournment thereof as may be resolved upon), proceed to the appointment of a duly qualified Medical Officer of Health and Public Analyst for the Borough, agreeably to the above-mentioned Acts, at a salary of £300 per annum—that is to say, £200 as Medical Officer of Health and £200 as Public Analyst, the Council to provide and furnish a Laboratory. .....

The gentleman appointed must devote his whole time to the service of the Council and perform all the duties required of him by any Sanitary Acts of Parliament and the Sale of Food and Drugs Acts and such other professional duties as may from time to time be required of him by the Council.

Borough of Leicester.—Medical OFFICER OF HEALTH and PUBLIC ANALYST.—The Corporation of Leicester are prepared to receive applications for the office of Medical Officer of Health for the Borough.

The gentleman appointed must be a legally qualified medical practitioner, and hold a diploma in Sanitary Science or Public Health. He will be required to act as Medical Superintendent of the Isolation Hospital and (subsequent to the requisite confirmation) as Public Analyst and to devote the whole of his time to the duties of the office.

It is interesting to add an extract from another advertisement which we have noticed this week. It runs as follows:—

Metropolitan Borough of Stepney.—APPOINTMENT of ASSISTANT PUBLIC ANALYST.—The Council of the Metropolitan Borough of Stepney are prepared to receive applications for the appointment of an Assistant Public Analyst. The person appointed will be required to act under the direction of the Medical Officer of Health and Public Analyst and to devote the whole of his time to the duties of his office.

Evidently the Council of the Metropolitan Borough of Stepney have found it expedient to seek the services of an analyst so that their medical officer of health may be freer to attend to his own special duties, having occupied previously the combined post of public analyst and medical officer. We predict that other boroughs will find ultimately that they will have to adopt a similar course, and those who still have to make these appointments would do well if at the outset they appointed one man to the post of medical officer of health and another to the post of public analyst.

THE PUBLIC PROSECUTOR AND HIS INACTION.

A VERY interesting discussion took place in the House of Commons on April 26th at the instance of Mr. Goddard, the Member for Ipswich, who called attention to the staff of the Solicitor to the Treasury, King's Proctor, and Director of Public Prosecutions. Mr. Goddard pointed out that of 20 officers in the department six were either pluralists or were receiving salaries personal to the present holders of the positions. There were three assistant solicitors with salaries of £600 rising to £800. Of these three one was also Assistant King's Proctor and received for that position an additional £1000 a year. And now it was proposed to create an Assistant Director of Public Prosecutions—an entirely new office. There was much complaint of the inaction of the

Public Prosecutor, Mr. Caine, Sir Henry Fowler, and others being the critics. In this matter, as in most others, the complaint is not so much of the money spent, though that is serious enough, as of the inadequate service rendered to the public—the absence of a sufficient *quid pro quo*. Sir Robert Finlay gave the usual official support to the value of the work done by the Public Prosecutor and said that it was "admirably done." We are sorry that we cannot agree with the Attorney-General in this view. As medical journalists we have had much occasion to see the uselessness of this official and of his *entourage*. In the class of cases in which he has been asked to prosecute coming specially under our notice we have rarely seen any power displayed but the power of making excuses for doing nothing. The whole question of the work of this department needs investigation. Perhaps one of the reasons why the Director of Public Prosecutions so seldom sees his way to prosecute is the number of other offices he holds—he is also, we believe, Solicitor to the Admiralty, the Charity Commission, the Home Office, the Treasury, the War Office, and the Works Commission, and King's Proctor.

THE EARLY DIAGNOSIS OF MENTAL DISORDER.

PROFESSOR C. F. MACDONALD of New York University, formerly President of the New York State Commission in Lunacy, contributes to the first number of *American Medicine*, published on April 6th, 1901, a paper referring to the important subject of the early diagnosis of insanity. In the majority of cases, as he points out, the responsibility of recognising insanity in its early stages falls upon the family physician. While the occurrence of insanity in a family is fraught with serious, painful, and distressing circumstances to patient and relatives, to the community its continued increase means the provision of large public asylums and an increased expenditure of public money for the care and treatment of the insane. Thus the State of New York has at the present time, in round numbers, 22,000 insane persons under care, which implies an original capital outlay of 20,000,000 dollars for hospitals and their equipments, and an annual expenditure of 5,000,000 dollars for the care and treatment of the inmates. A considerable number of cases in the early stages of insanity may, especially among the wealthy classes, be properly and safely treated at home provided they are in competent medical hands. Insanity is a disease of gradual onset in most instances and the prodromal stage —that of alteration of conduct and character in contradistinction to that of actual mental aberration—may last for weeks or months. Relatives and friends are often the first to detect slight changes in character and lapses from the normal self, though they often make the mistake of attributing these to mere eccentricity or else they endeavour to conceal them or to make light of them in their ignorance. The prodromal symptoms of insanity are both somatic and psychical. The somatic symptoms include insomnia and headache, tinnitus aurium and vertigo, pavor nocturnus, feebleness of circulation in the extremities, anorexia, and constipation. The co-existence of persistent insomnia, constipation, and headache should always be regarded as serious, especially if they are associated with general apathy or mental irritability in a person previously active and well. The psychical symptoms may assume the form of undue exaltation and loquacity, levity of conduct in a person hitherto steady, depression of spirits, marked introspectiveness, hypersensitiveness of conscience, morbid aversion to friends, undue suspicion towards others, suicidal longings, and persistent forebodings of evil. Any lapses from morality and decency in persons previously steady and well-behaved constitute warnings of a graver kind. If other predisposing factors co-exist, such as alcoholic or drug habits, cranial injury, sunstroke, epilepsy, prolonged mental anxiety, or recent ill-health, skilled medical advice should at once be sought. The presence of alcoholic intoxication, of delirium tremens, or the occurrence of meningitis or sunstroke, must be kept in mind as possibly masking or even simulating an attack of insanity. If hallucinations are present, and especially if delusions are associated therewith, the diagnosis of insanity would be confirmed. Special attention should be paid to the facial expression, the appearance and reaction of the pupils, the speech and handwriting, many of which are characteristically influenced in the early stages of mental disease. The importance of relieving insomnia, particularly if it is associated with slight mental depression and constipation, can hardly be over-estimated. Insomnia easily becomes a habit, and if allowed to go on unchecked it produces cerebral exhaustion and predisposes to mental disease. This threefold group of symptoms—viz., insomnia with mental depression and constipation, is so common at the onset of the acute psychoses that the experienced physician will anticipate the risk and seek by early treatment to avert the threatened attack.

LONG HOURS IN SHOPS.

AT the sitting of the Select Committee appointed by the House of Lords to consider the question of early closing for shops, which took place on April 29th, both Sir William S. Church, President of the Royal College of Physicians of London, and Sir William Mac Cormac, President of the Royal College of Surgeons of England, gave evidence. Both agreed that the hours in shops were too long and Sir William Church pointed out that the extent of injury depended not only on the length of time during which the shop assistants worked but also upon such matters as the ventilation, lighting, and condition of the buildings. Sir William Mac Cormac said that in his opinion the matter deserved the earnest attention of the Government. We are glad to see the leaders of the medical profession in England speaking out upon this matter, for it is one which is of the utmost importance to a very large body of our fellow-citizens. The public do not seem to realise that supposing a shop to open at 9 A.M. and to close at 7 P.M. it does not simply mean 10 hours' work for the assistants. It means something much more like 12 or 13 hours in many shops, particularly those of the drapery trade. Of course, as Sir William Church pointed out, in a small shop where there were no assistants but business was attended to by members of the family compulsory early closing would be unnecessary. But it is in the large establishments that legislation is called for.

THE PECULIAR PEOPLE AGAIN.

TWO members of the sect known as the Peculiar People were tried before Mr. Justice Phillimore at the last Old Bailey Sessions. Their case presented the features that have become so familiar in the criminal courts, and it occasioned the usual embarrassment when the question of punishment had to be decided. They had had 13 children, of whom five had died without receiving medical aid, and in the case of the fifth, an infant six months old suffering from pneumonia following whooping-cough, the "elder" had been summoned and he had pursued the usual course of anointing and prayer, but the child had died notwithstanding. It was, as is usual, impossible to prove in the sense required by the criminal law that the child would have lived had a medical man been in attendance, and so the charge of manslaughter was dropped and the parents were convicted of causing unnecessary suffering to their offspring. The male prisoner seems to have cross-examined the medical witness who had made the post-mortem examination as

to whether if the prayer and the oil had caused cessation of pain there would have been evidence of this cessation of pain discoverable after death (to which he naturally received a negative answer), and he was no doubt genuinely imbued with a fanatical belief in the righteousness of his conduct. In the end, however, the jury convicted him and a fine of £20 was imposed and promptly paid, while the female prisoner, his wife, was bound over to come up for judgment if called upon, Mr. Justice Phillimore being of opinion that a more severe sentence would introduce an element of religious martyrdom into the proceedings. On the other hand, the danger of sentences being too light in such cases arises from the fact that it is an advantage to some parents to be able to get rid of their children, and that the risk of being fined may be worth incurring by people who may have no other motive for being "peculiar" than the desire to diminish their responsibilities with impunity. Whether an "elder" would detect such a motive and refuse to be called in by converts of this description we cannot say. At present the children of the Peculiar People do not constitute a large class, but they none the less deserve that the dangers to which they are exposed should be seriously considered.

REORGANISATION OF THE MEDICAL SERVICES OF THE AUXILIARY FORCES AND OF THE ARMY MEDICAL RESERVE.

WE have received a copy of the proceedings of the Conference on the Re-organisation of the Medical Services of the Auxiliary Forces and of the Army Medical Reserve, held on Dec. 19th, 1900, under the presidency of Professor Thomas Annandale, F.R.C.S. Edin., in which Professor Chiene and a number of officers of the volunteer forces, yeomanry, and volunteer medical staff corps took part. The conference was arranged by the East of Scotland Tactical Society. We are very glad to see that a movement of this kind has been started because the more light that is thrown upon the subject of medical aid in modern warfare and the more people are interested and the matter is discussed the better. The chairman opened the proceedings by adverting to the experience of the South African War and by giving a preliminary sketch of the objects which the society had in view and, as a teacher in an important medical school, he offered some remarks upon the training and position of the members of the Royal Army Medical Corps. He said that the members of that corps and the civil surgeons connected with them had done their duty nobly, and it was not with them that there was any dissatisfaction, there was, however, a general desire to assist the Government by carefully considered suggestions for the improvement and reform of the medical services of the regular army and reserve forces. The report of the Royal Commission on the Hospitals in South Africa not having been published, however, at the time the chairman and those taking part in the conference were labouring under the disadvantage of not knowing how matters stood. Professor Chiene remarked that if the civil surgeons who were to assist in time of war were to be apart from the volunteers then he held "a strong view that it should be an Imperial force, and that in the old country and in the colonies there should be men and women chosen for their special knowledge in the treatment of disease and injury, in the prevention of disease, and in the nursing of the sick. It appears to me that every hospital in the country should be asked to supply men as physicians and surgeons." We are glad to notice that Surgeon-Captain Hepburn, Edinburgh Company, Volunteer Medical Staff Corps, speaking of the men who enter the Army Medical Services, said that some time ago he took the trouble to look up the statistics of Edinburgh University for the last 15 years and he was surprised to find that a very large number of class medallists and demonstrators had gone into the home and Indian service and that the professional status of the men "sent into the medical service of the army was quite as good as any corresponding number of men sent into any other professional walk in life in the world." A number of volunteer medical officers took part in the discussion and many resolutions were passed, but the little pamphlet requires to be read *in extenso*, for it does not readily lend itself to analysis and criticism within a reasonable compass.

THE BIRMINGHAM CONSULTATIVE MEDICAL AND SURGICAL INSTITUTION.

IN our issue of April 27th, p. 1223, we noted that the Birmingham Consultative Medical and Surgical Institution had determined to advertise for two medical men in the place of Dr. H. Ward Irvine. We learn from the *Birmingham Gazette* of April 29th that the committee received a large number of answers from fully-qualified practitioners all over the country. The committee, however, were not satisfied with this response and they are now advertising for a physician, a surgeon, an oculist, an ear and throat specialist, and a gynæcologist. Again we wait with interest the result of the advertisement.

SANITATION OF CHURCHES.

ACCORDING to the *Revue Scientifique* of April 27th one of the Italian bishops, Monsignor Franceschini, has sent to the clergy of his diocese a circular enjoining them to adopt sundry sanitary precautions in their churches. Immediately after saints' days, when the congregations have been large, the paved floors are to be cleansed with sawdust soaked in a solution of corrosive sublimate (1 in 1000). On ordinary occasions the floors are to be frequently swept, after a preliminary sprinkling with water in order to avoid raising dust. Every week or oftener the seats and confessional boxes are to be dusted with damp sponges and cloths. Every week or oftener the *grilles* of the confessional boxes are to be cleansed with alkaline lye and afterwards polished. The holy water fonts are to be emptied every week, or oftener if necessary, and washed either with boiling alkaline lye or with solution of corrosive sublimate (1 in 1000). Our readers will remember that THE LANCET of Jan. 27th, 1900, p. 252, contained a description of a new font for holy water devised by Mr. J. J. Bruns of Arnhem in Holland, and approved by the Archbishop of Utrecht. It is pleasing to find the clergy thus careful of the bodily as well as of the spiritual health of their people.

ON CERTAIN MENTAL AND NERVOUS DISTURBANCES DUE TO THE USE OF TRIONAL.

TRIONAL is now largely used as a hypnotic and cerebral sedative in various forms of nervous and mental ailments and thus the following case, which illustrates certain rare but important sequelæ following its use, has a special interest. Dr. Stuart Hart of New York refers to it in an article in the *American Journal of the Medical Sciences* for April. The case was that of a woman, aged 50 years, who for a period of 20 years was a sufferer from nervous depression, gastric dyspeptic troubles, and insomnia. She was apparently free from organic disease. For two months she had been taking trional at the rate of 15 grains every alternate day. At the end of that time (April 20th, 1899) she somewhat suddenly developed symptoms of acute gastro-intestinal irritation—viz., severe colicky pain, nausea, and vomiting. She was unable to retain food taken by the mouth, and only rectal feeding was possible. The trional was stopped and morphia was given hypodermically to allay the pain.

Hæmatoporphyrinuria next followed; a little albumin and a few granular casts appeared in the urine, and she began to suffer from cardiac disturbance and exhibited systolic and diastolic murmurs. The nervous disturbance took the form of peripheral neuritis leading to foot-drop and wrist-drop on the left side, and subsequently on the right side. These symptoms of extensor paralysis were preceded by tingling and pricking sensations about the vulva, the hands, and the feet. The symptoms of hæmatolysis and renal disease above referred to were soon followed by those of cerebral toxæmia—viz., periods of delirium, mental confusion, and hallucinations of time and space. The pain in the extremities was complicated with pains and "girdle-sensations" in the abdomen which became severe. The skin generally was so hyperæsthetic that she could not tolerate the pressure of the bed-clothes. She lost flesh for the next few weeks, and had slight œdema of the ankles and considerable physical weakness. All these symptoms, however, gradually subsided and in the course of 12 months she quite recovered. The nervous troubles passed away in the order in which they appeared—viz., first the disturbances of the vagus and the heart, next the neuritis affecting the hand and foot on the left side, and lastly that of the hand and foot on the right side. The heart returned to the normal condition, leaving no trace of valvular disease or enlargement, and the mental condition was unimpaired, all traces of the hallucinations having completely passed away.

ASTRONOMY AT THE VATICAN.

IT is reported that an American citizen and a member of the Roman Catholic Church, who is much interested in celestial and terrestrial physics, has made what he calls a humble offering to the Pope in the shape of a telescope which is said to exceed greatly in size even the one shown at the Paris Exhibition of last year. His Holiness is stated to have accepted the gift, which is now destined to find a prominent place amongst the many valuable instruments of research of the Vatican Observatory which was presented just over a century ago by Cardinal Zelada with the then famous Dollond's telescope. In connexion with this statement it may be of interest to note that a very erroneous notion generally prevails with regard to the original development of the Vatican Observatory and that usually a quite recent date is assigned to it, though it would appear to be the oldest of its kind, with the exception, probably, of the one at Peking. It is true that the Vatican Observatory in its present outward appearance and constitution only dates back to 1888, the year in which Pope Leo XIII. celebrated the fiftieth anniversary of his priesthood. But there seems to be scarcely any doubt that an observatory tower was erected in Rome as far back as some time previous to 1582 and, as it would appear, chiefly in connexion with the reform of the Calendar. According to B. Crescenzi, the author of the important work which is entitled "Nautica Mediterranea," and which was published in Rome in 1607, Pope Gregory XIII. was mainly responsible for its erection. It is recorded that the tower was intended exclusively for astronomical observations and researches, and there is, from an historical point of view, every reason to suppose that it was the first celestial watch-tower ever built in Rome. Since its erection, however, and partial endowment by Pope Gregory XIII., it passed through so many and so highly complicated vicissitudes that it now forms for the astronomical student a large and interesting field of historical speculation. We are, therefore, not surprised to observe that while it was at one time most anxiously cared for and the scientific work done there may be termed to have been of the utmost importance, at another time it was utterly neglected and devoid of any scientific management or control; finally, it became of world-wide renown at the beginning of the last century, chiefly on account of the scientific labours and able management of Philip Gili, who for a period extending over 30 years was its director. After the death, however, of Gili, which occurred in 1821, it again became quite disorganised. All the instruments and records were dispersed and the observatory itself was entirely deserted both as regards the scientific and social interests attached to it. In 1888 the Vatican Observatory commenced a new epoch in its history. In that year, as already mentioned, the commemoration of the fiftieth anniversary of the priesthood of Pope Leo XIII. took place, and on that occasion all the instruments and apparatus given by members of the Roman Catholic Church interested in celestial and terrestrial physics were brought together, and it then occurred to the organisers of the science section of the Vatican Exposition that they would find a suitable home in the old Gregorian tower. The suggestion was warmly approved and soon carried into effect and Father Denza, a great friend of Secchi, was now called upon to undertake the management of the revived observatory. He began his work in 1889 with a very interesting and varied programme which he and his able assistants have well carried out. The investigations which were thus introduced there relate to meteorology, terrestrial magnetism, astronomy, and lastly geodynamics. In addition, the building is well situated for meteorological researches and observations; moreover, it is well equipped with the most modern instruments necessary for the continuous record of meteorological data. Since 1889 it has always kept well apace with the times and would now bear comparison with any observatory in Europe.

OTITIS AND CEREBRO-SPINAL MENINGITIS.

MORE or less localised meningitis has long been a well-recognised sequel of otitis media, but diffuse affection of the cerebral and spinal meninges—cerebro-spinal meningitis—has not received much attention. At the meeting of the Société Médical des Hôpitaux of Paris on Feb. 1st M. Lermoyez reported two cases which showed that aural infection, even when slight, might give rise to cerebro-spinal meningitis by creating a means of entry for the meningococcus. More recently, at the meeting on March 8th, M. Vaquez and M. Ribierre described the following case. A woman, aged 37 years, entered hospital on Feb. 13th, 1901. Three weeks before, while in good health, she commenced to feel acute pains in the occipital region which for three or four days were without respite. Then the pains in the head diminished and pains in the lumbar spine, which radiated into the buttocks, the lower part of the abdomen, and the upper part of the thighs, appeared. Since June, 1900, she had had right purulent otitis which followed influenza. For several weeks there had been mental symptoms—depression amounting almost to melancholia, defective attention, and slight amnesia. On admission the discharge was slight but very fœtid. The temperature was 104° F. and the pulse was 118. The occipital region was tender and was also the seat of spontaneous pains which constantly recurred. The patient had much difficulty in sitting up in bed and the movement aroused or increased the lumbar pains. Kernig's sign was well marked. Investigation of the knee-jerks was rendered difficult by flexor contracture. Intense delirium, the hydrocephalic cry, and rigidity of the neck followed. Lumbar puncture gave exit to pus containing a micrococcus which usually presented itself in the form of a diplococcus and took Gram's stain. Examination of the ear showed a polypus descending from the attic to the lower part of the middle ear. Death took

place on Feb. 23rd. The necropsy showed some softening of the petrous portion of the right temporal bone and fibrino-purulent streaks on the anterior surface of the cerebellum and pons. The spinal canal was full of greenish-grey pus. Thus the meningitis was spinal more than cerebral. M. Vaquez and M. Ribierre drew attention to the non-severity of the aural condition and the absence of direct meningeal infection. They thought that the microbial invasion took place by the lymphatics and that instead of a local infection by contiguity a veritable sowing of the cerebro-spinal fluid with microbes took place.

THE REGISTRATION OF PLUMBERS.

A MEETING of representatives from various district councils throughout the United Kingdom and Ireland met some members of the Worshipful Company of Plumbers at the Guildhall on April 24th, when it was reported that some 2000 additional names had been added to the register within the past few months. The public will be well advised to welcome any measure that insures competency in those engaged upon the important work of the plumber, but the success of the movement rests more with the operative plumber than with the public. Unfortunately, until recently most of these men have regarded the aim at reform with indifference, because no immediate material gain appears likely to accrue to them from it. The Plumbers' Company, who have the best interests of the trade which they represent at heart, as well as a desire to benefit the public, have since the movement was inaugurated advanced a sum of no less than £25,000 to defray the excess of expenditure over income incurred in promoting the registration scheme, and the plumbers as a body should support them.

IMPROVEMENTS IN RADIOGRAPHY.

A DESCRIPTION of some recent improvements in radiographic apparatus was given not long ago by Dr. Rosenthal of Munich in an address delivered before the Munich Electrotechnical Society. For the surgical localisation of foreign bodies, such as bullets embedded in the tissues, he had, in conjunction with Surgeon-General Professor von Angerer, devised an instrument called the "punktograph," which, he says, gives very accurate indications and can be used with the utmost facility. The punktograph consists of two rods having each a metallic ring at one end, and these rods are placed on opposite sides of the part of the body where the foreign object lies, in such positions that the latter, when viewed with the fluorescent screen, appears in the centre of both rings, and is therefore known to be in a line with them. The position of the rings being marked on the skin they are moved to other situations and the same process is repeated. The imaginary lines, the ends of which are thus marked on the skin, will obviously intersect in the foreign body, and its depth may be judged by a comparison of the distances between the two points forming each adjacent pair. With the help of apparatus manufactured by the Voltohm Electrical Company of Munich and Frankfort Dr. Rosenthal has, together with Professor Rieder, succeeded in taking photographs of the heart with an exposure of less than a second, and a number of such photographs will be inserted in a forthcoming work on the Roentgen rays in medicine by Professor von Ziemssen and Professor Rieder. All Roentgen ray images, whether photographs or views on the screen, are necessarily larger than the original object itself, because they are produced by the diverging rays from the focus tube. For examination of the heart, however, it is desirable to have the exact dimensions of the original, and this has been accomplished by the "orthodiagraph," devised by Professor Moritz of Munich and manufactured by the Voltohm Company. The illustration of the orthodiagraph shows a table on which the person to be examined presumably lies, and surrounding the table, near one end of it, is a rectangular moveable frame the plane of which is perpendicular. The focus tube is placed on the side of the frame which is underneath the table, and the principle involved seems to be the elimination of any error due to the divergency of the rays by moving the tube so that the outlines of the heart are traced out by rays which in all positions are parallel to a given direction.

THE NEW MEDICAL OFFICER OF HEALTH OF THE CITY OF LONDON.

DR. WILLIAM COLLINGRIDGE, the newly appointed medical officer of health of the City of London, was born in Islington in 1854 and was educated at Clewer House School, Windsor. In 1872 he entered as a student at St. Bartholomew's Hospital, and in 1875 he entered Christ's College, Cambridge, where he took the degrees of M.A., M.B., D.P.H., and M.D., and subsequently that of LL.M. During the Turco-Servian war in 1876 Dr. Collingridge went to Belgrade as a volunteer surgeon and was the first English surgeon to arrive. He immediately received a commission as surgeon and left for the army before Novi-Bazar, where he engaged in hospital organisation. At the end of the war Dr. Collingridge was decorated by King Milan with the order of the Takova, and on his return home was appointed medical officer of the Port of London. In this capacity he has been engaged for the past 20 years. In 1892 he was appointed as surgeon-major to the command of an experimental company of the new Militia Medical Staff Corps. This company proving successful, the corps was enlarged to eight companies, and subsequently Dr. Collingridge was appointed surgeon-lieutenant-colonel commanding, a post from which he retired in 1900. Dr. Collingridge is an Honorary Associate of the Order of St. John of Jerusalem.

THE LONDON PSYCHO-THERAPEUTIC SOCIETY.

WE have received a circular informing us that at a meeting of medical men and others interested in the study and application of psycho-magnetics, mesmerism, hypnotism, and kindred psychic and mental forces, held at the Frascati Restaurant, London, on April 1st last, it was unanimously decided to establish an organisation under the title of the London Psycho-Therapeutic Society. The society has in view, amongst other objects, the systematic study and investigation of the psychic and mental forces upon such lines as may be considered desirable, and it is hoped to establish central headquarters where the poor may be freed from those diseases especially susceptible to psychic and mental treatment. The society does not propose to be in any way antagonistic to existing scientific and sectarian bodies interested in these subtle forces. Rather it is desired to draw into one society representatives of all the various schools of thought. This is a catholic basis with a vengeance and we cannot help thinking that the gentleman responsible for the first meeting having been held on April 1st was singularly happy in his choice of a date. The idea of medical men, or of any other body of men capable of exercising common sense, meeting on a common platform with the so-called Christian Scientists, with the exponents of the Viavi system, or with osteopathists is too ridiculous for words. We are not unwilling to allow that treatment by hypnotic suggestion may have a certain value when carried out by an honest and properly trained medical man and our review of Dr. Lloyd Tuckey's work upon the subject[1] is a proof of what we say. The debate upon

[1] THE LANCET, Nov. 3rd, 1900, p. 1279.

hypnotism at the Edinburgh meeting of the British Medical Association[2] shows that medical men are willing and anxious to study the matter in a scientific manner and we cannot see that another society whose constitution would evidently open the door to fraud of various kinds is necessary.

THE STEAMBOAT SERVICES ON THE THAMES.

IT is to be wished that the excellent efforts of the Thames Steamboat Company to place the great river highway at the disposal of the public as a means of getting from place to place will be crowned with success. There can be no doubt that travelling by waterway is healthful, and certainly more so than travelling *sub terra*. The air over the river is always fresh, the constant contact of a breeze with the water in motion tending to keep up a maximum degree of organic purity. The prospects of a successful service seem this year to be bright, and a very good start has been made. On May Day a review of the fleet of the company's steamers was held and crowds witnessed the lively and somewhat novel scene from the Thames Embankment. The fleet consists of 36 steamers and it is proposed to run a rapid service of boats between London Bridge and Battersea, while boats will run also to Greenwich and Woolwich, to Kew Gardens, and to Hampton Court. It seems an anachronism that the Thames is not yet a popular or successful waterway, although there is no doubt that a good service of steamers would be a source of convenience to thousands. The whole project is, however, heavily handicapped by the excessive tolls levied at the piers. These tolls should be abolished in the interests of a very large section of the metropolitan public. Such an imposition is fatal to the development of the enterprise and a hindrance to the improvement of the steamers. On every other navigable river of the civilised world the excellence of the appointments of the passenger steamers and the excellence also of their construction and design are well known. The greatest city in the world still leaves much to be desired in regard to its steamboat services on its great historic waterway.

STREET NOISES.

SOME little time ago the London County Council passed a by-law to the effect that no one should shout to the annoyance of the public while hawking newspapers. This order was promptly backed by the issue of a circular from the Commissioner of Police stating that the police were instructed to see that the by-law was obeyed. During the winter, when there was little or no racing, the streets were fairly quiet, but with the commencement of the flat-racing season the ears of workers are again assailed from the hour of seven o'clock in the morning with the yells of sellers of race cards and newspapers giving racing results or "runners and betting." The police take absolutely no notice. A brain-worker appealed recently to a constable in the Strand and was told that if he pointed out any specific offender the man would be charged at the police-court if the complainant was prepared to appear and to give evidence. Now such a method of procedure entirely destroys the value of the by-law. It is not to be expected that, say a literary man or a banker, can leave whatever work he is engaged in, run down sundry flights of stairs as soon as he hears a winner yeller, find a policeman, and, if the yeller has not run away, point him out, ascertain when he will be charged, and again leave his work to go to give evidence. Some little time ago a policeman arrested on his own initiative a newspaper hawker for shouting and the magistrate, Mr. Plowden, inflicted a fine.[3] We cannot see why this procedure should not be universally followed. As we have said over and over again there is no need to shout. The sellers of matches and penny toys do not as a rule shout, nor do the sellers of many newspapers, and it is monstrous that "Winners" and the like should be yelled by hawkers to the unspeakable annoyance of those who have to work with their brains. A few arrests by the police emphasised by a protest signed by dwellers and toilers in our busy thoroughfares would do an immense amount of good.

[2] THE LANCET, August 6th, 1898, p. 364.
[3] THE LANCET, July 14th, 1900, p. 120.

THE DUTIES OF A MEDICAL OFFICER OF HEALTH.

As we have so often said, the duties of a medical officer of health are, if properly performed, sure to bring him into conflict with somebody sooner or later. A good instance of this is seen in an incident which occurred at a recent meeting of the Lancaster District Council. Mr. G. R. Parker had in his report to the Health Committee called attention to certain conditions existing at Cockerham Hill Farm of which a gentleman named Colonel Bird is apparently the landlord. According to the *Lancaster Guardian* of April 27th, Mr. Langley, the inspector of nuisances, said that "the statements which Dr. Parker had made were quite correct." Colonel Bird, however, characterised Mr. Parker's statements as "absurd, untrue, and incorrect." He also accused him of getting information from "some person who was not connected with the farm" and of making a report upon "what he might call hearsay evidence." Eventually Colonel Bird suggested that the farm should be inspected by members of the council, and this was agreed to. We are glad to see that the *Lancaster Guardian* points out that the chairman of the meeting should have made a firmer stand. We have no wish to imply that medical officers of health are always infallible, but it is a scandal that an interested person should be allowed to attack a public official merely for doing his duty. We do not, of course, know how soon after the meeting the members of the council were to examine the farm. In any case they will probably find that the grosser evils will have been remedied, but we trust that Colonel Bird will be made to understand that a medical officer of health acts for the benefit of the community and not for that of any one member of it, and, in addition, that for an accused person to defend himself it is not necessary to charge the accuser with lying.

ECHINOCOCCUS CYSTS OF THE DORSAL MUSCLES.

IN the *Gazzetta degli Ospedali e delle Cliniche* of April 21st Dr. Alfredo Baldacci of Pisa gives a lengthy account of a case of this rare condition. The patient was a married woman resident in Pisa and 31 years of age. About four years ago she noticed a roundish swelling of the size of a pigeon's egg on her left side in the axillary region in the fifth or sixth intercostal space. It increased in size and in two years was as large as a fowl's egg. After a fall downstairs, in which she bruised her shoulder, the swelling increased more rapidly and in about a month it was of the size of a large apple. On March 5th, 1900, she was admitted into hospital, where the swelling was diagnosed as a chronic abscess (*ascesso freddo*) under the left axilla; 17 ounces of purulent fluid were withdrawn by means of Dieulafoy's aspirator and the patient was discharged on March 25th. The swelling soon returned and a second one made its appearance close beside the first; the patient was re-admitted to hospital on Feb. 4th, 1901, and the case was again diagnosed as one of subaxillary chronic abscesses probably due to caries of a rib. On Feb. 6th aspiration with Dieulafoy's instrument was again resorted to, but with only partial success, for after 21 ounces of thick purulent fluid were withdrawn the flow ceased entirely, although the swelling remained of considerable size. On Feb. 10th a free incision was made under chloroform and four separate cysts were found. One was of

the size of the head of a fœtus at the sixth month and lay between the trapezius, the latissimus dorsi, and the serratus magnus; one, of the size of an apple, lay in the thickness of the trapezius; one, somewhat smaller than the last-mentioned, was between the latissimus dorsi and the lumbo-dorsal aponeurosis; and the fourth, of the size of an egg, was in contact with the intercostal muscles.

THE FATAL GLOVE FIGHT AT THE NATIONAL SPORTING CLUB.

AT the inquest held to inquire into the circumstances attending the death of Murray Livingstone, professionally known as "Billy Smith," which was concluded before Mr. John Troutbeck on Monday last, the jury returned a verdict of "Accidental death." The cause of death was proved by a post-mortem examination to be the rupture of one of the cerebral vessels. Every precaution seems to have been taken by the promoters of the competition against accident, the fight was perfectly fair, and both men were properly trained. Accident was the only possible verdict. To quote the words of a witness: "So long as boxing matches are legal there will be accidents," and we can but agree in this opinion. We believe that this is the fourth death which has occurred after boxing competitions at the National Sporting Club since its inception 10 years ago. The curious fact is, that deaths should occur at an institution where every possible care is taken to provide against mishap, whereas boxing competitions take place nightly on brick-paved floors in the roughest environment and no harm occurs. It seems to be simply bad luck that the inevitable toll of lives exacted by a sport of enormously widespread popularity should be exacted in the very place where all precautions are taken.

DR. ROBERT HUTCHISON will give a special course on Foods and Dietetics during the Summer Session, at the London Hospital Medical College. The lectures will be delivered on Wednesdays and Fridays, commencing on Wednesday, May 8th, in the Physiological Theatre. The fee for the course to others than students of the college will be £2 2s. and further particulars will be given by Mr. M. Scott, the Warden.

THE Medical Society of London will hold a conversazione in the rooms of the society, 11, Chandos-street, Cavendish-square, on Monday, May 20th. Mr. F. Richardson Cross, F.R.C.S., will deliver the Oration, on "Some Landmarks in the Progress of Medical Science," at 8.45 P.M. Previously there will be a reception by the President and subsequently smoking will be permitted to the accompaniment of the "Bijou" Orchestra.

THE Committee of Inquiry appointed by the Governors of the National Hospital for the Paralysed and Epileptic held their first meeting on Wednesday last. The committee is constituted as follows: Sir Edward Fry (chairman), Lord Wolverton, Sir W. W. Karslake, Mr. Timothy Holmes, F.R.C.S., and Mr. Cecil Russell, with Mr. J. Danvers Power as honorary secretary. The business of the meeting was of a purely formal character.

AN inquest was held last week at Poplar upon the body of a man when a verdict was returned of "Death from lead-poisoning." The medical evidence showed that the man died from intestinal obstruction, presumably of malignant origin. A question will be asked about the matter in the House of Commons, we hear as we go to press, when the public will be placed in possession of the real facts.

UNDER the presidency of Sir William Broadbent the friends and members of the Medical Graduates' College and Polyclinic held a conversazione on May 1st, at 22, Chenies-street. There was a good attendance, the chief attraction being an interesting lecture by Mr. Jonathan Hutchinson on (*a*) the Retention of the Leaf in Deciduous Trees, and (*b*) the Suppression of the Tusk in Elephants.

THE annual meeting and May dinner of the Aberdeen University Club, London, will be held at the Trocadéro Restaurant on Wednesday, May 15th, at 7 P.M. The chair will be taken by Dr J. Mitchell Bruce, and those intending to be present should communicate with the honorary secretaries, Dr. James Galloway and Mr. J. A. Robson, at 54, Harley-street, W.

A TELEGRAM from Sir W. F. Hely Hutchinson, the Governor of the Cape of Good Hope, to Mr. Chamberlain, received at the Colonial Office on April 25th, states that for the week ending April 20th there were 64 cases of plague admitted, of which number 17 were Europeans. No fresh cases had occurred among persons under military and naval control.

THE Ingleby Lecture of the University of Birmingham will be delivered on Tuesday, May 14th, at 4 o'clock, in the medical lecture theatre of the University, by Dr. William J. Smyly, President of the Glasgow Obstetrical and Gynæcological Society, who has taken for his subject "The Lower Uterine Segment and the Contraction Ring."

THE annual dinner of the West London Medico-Chirurgical Society will be held at Frascati's Restaurant, Oxford-street, W., on Wednesday, May 8th, at 7.30 P.M. Further particulars can be obtained from the secretary, Dr. G. P. Shuter, Chiswick-lane, W.

HIS MAJESTY THE KING has graciously consented to become patron of the Middlesex Hospital, a position which Her late Majesty Queen Victoria as well as her predecessors George IV. and William IV. held during the whole of their reigns.

AT a meeting of Grand Lodge of English Freemasons held on April 24th at Freemasons' Hall, Bro. Francis Woodhouse Braine, F.R.C.S., was appointed and invested as one of the Senior Grand Deacons.

QUEEN ALEXANDRA has graciously consented to continue her patronage of the West-End Hospital for Nervous Diseases, Epilepsy, and Paralysis, Welbeck-street, Cavendish-square, W.

THE death is announced as having occurred suddenly in London of Dr. John Cavafy, for many years physician to St. George's Hospital.

THE BATTLE OF THE CLUBS.

LAY MEDICAL INSTITUTIONS.

DR. LESLIE PHILLIPS has addressed a memorial to the General Medical Council pointing out the anomalous position in which medical men stand who are attached to institutions giving medical advice which are either owned or governed by laymen. Shortly, Dr. Phillips's argument is as follows. The Medical Acts of 1858 and 1886 provide that only registered medical men can recover charges for medical services at law. Many institutions are owned by laymen and give medical advice by means of a medical man who is a paid servant. If the patients of these institutions did not pay in advance the proprietors would lose their money, for they themselves could not sue, being unqualified, and if the medical man were to sue the patients would deny that

they had ever contracted with him. For laymen to carry on a medical practice in this way is illegal, therefore any medical man who assists in the carrying on of such a practice is acting "not only against the spirit but against the letter of the law." Pay hospitals stand in the same category as medical aid associations. Dr. Phillips implores the General Medical Council to make the holding of such posts as he describes conduct "infamous in a professional respect." Dr. Phillips's view does not seem to us to be legally sound. Firstly, anybody may practise so long as he does not give himself out to be a medical man. Secondly, there is nothing illegal in any layman, or combination of laymen, keeping a medical man as their paid servant. The surgeon to a large works or a colliery is in exactly the same position *legally* as are the medical men who were in the service of Mr. Y. and Mr. Z., or of the friendly societies who were referred to in THE LANCET of Jan. 4th, 1896. The illegality theory will never do, and the only method, so far as we can see, of doing away with institutions of the kind mentioned by Dr. Phillips is to make it plain, first, to medical men that it is not nice to be sweated, and second, to patients that it is not for their benefit that they should be attended by an overworked practitioner.

CONTRACT PRACTICE MIDWIFERY FEES.

The Midland Medical Union is at present occupied with the following case. Dr. W. C. Rainsbury is surgeon to the Stanton Hill Colliery Club. The contract is for medical and surgical attendance, not including midwifery, and the fee in the past for midwifery has been half a guinea. A few months ago Dr. Rainsbury, in accordance with a resolution of the Midland Medical Union, raised his fee for midwifery to one guinea. After a great deal of discussion and after meetings had been held between the representatives of the colliery club on the one hand and Dr. Rainsbury and the members of the Midland Medical Union on the other, the club refused to give way and Dr. Rainsbury received three months' notice to terminate his appointment as surgeon to the club. The union is supporting Dr. Rainsbury in his demand, but at present the wives of colliers are attended by practitioners who are not members of the Midland Medical Union for half a guinea. There is no doubt, in our opinion, that a collier is perfectly well able to pay a guinea as a midwifery fee. The wages of colliers are very good in addition to the fact that they get coal for next to nothing, instead of having to pay 30*s.* or more per ton as others have to do. It is advisable that any medical man who is thinking of applying for this or any other contract appointment in Nottinghamshire or in Derbyshire should before doing so communicate with the secretaries of the Midland Medical Union, Dr. Ernest Houfton, Shirebrook, near Mansfield, or Mr. C. J. Palmer, Mansfield-Woodhouse.

SHIP-BORNE RATS AND PLAGUE.

A MEMORANDUM has been prepared by the medical officer of the Local Government Board with regard to the risk of importing plague into this country by means of plague-infected rats on board ships. In it the steps are detailed which, in the opinion of the Board, should be taken by sanitary authorities of seaports with the view of preventing the introduction of the disease in this way. The Board request that sanitary authorities will instruct their officers to use their best efforts to secure the carrying into effect of the suggestions which the memorandum contains and recommend that a copy of the memorandum should be given to the medical officer of health and another to the inspector of nuisances.

[OFFICIAL COPY.]

SHIP-BORNE RATS AND PLAGUE.

In view of the susceptibility of the rat to plague, and of risk therefore of importation into this country by shipping of plague-infected rats, sanitary authorities of seaports should be on the alert to prevent introduction of the disease into their districts in this way.

1. On the arrival in port of a vessel whereon during the voyage plague, or sickness suspected to be plague, has occurred, measures should be taken to secure the destruction of the rats on board the vessel. Until this has been done endeavour should be made to prevent rats leaving the ship by mooring the vessel a sufficient distance from other ships and from the shore, and by placing guards on cables and hawsers in use for mooring purposes.

2. In the case of vessels that have come from places infected with plague, but on board of which no plague or suspected plague has occurred, strict inquiry should be made on their arrival in port as to mortality or sickness among rats during the voyage. Should this have occurred the authority would do well to obtain the body of a sick rat for the purpose of ascertaining the nature of the malady affecting those animals on board the vessel. In the event of the malady being found to be plague the ship should be dealt with as under Paragraph 1.

3. Exceptional sickness or mortality among rats on board any vessel within the district, whatever may have been her port of departure, should be viewed with suspicion and as giving occasion for action similar to that indicated under Paragraph 2.

4. Rats when destroyed on shipboard should not be handled; they should be at once cremated.

5. In the event of rats on board any ship being found to be infected with plague all parts of the vessel frequented by those animals should, as far as possible, be disinfected.

6. The authorities of seaport towns invaded by plague should endeavour to secure the destruction of the rats of the town, not least those inhabiting the docks and quayside warehouses. Measures should be taken to guard against shore-rats making their way on board vessels lying in the port and attempt made to destroy all rats on board ships about to proceed on their voyage. Captains of such vessels should be urged to take steps during the ensuing voyage for the destruction of rats that may have remained alive on board their vessels notwithstanding the action of the local authority.

W. H. POWER, Medical Officer.

Local Government Board, Medical Department, April, 1901.

THE ROYAL ACADEMY.

THE Exhibition of the Royal Academy of Arts, which will open to the public on May 7th, gives the visitor the impression that bad times, the war, and the general depression have affected artists, for this exhibition is curiously dull. There are, however, not so many pictures dealing with the war or with the last days of Her Majesty the late Queen as might have been expected. M. Benjamin Constant's picture of the Queen (149) occupies the wall at the end of Gallery No. III., being surrounded by drapery of blue and crêpe. She is sitting in a chair of state in a Gothic chamber, presumably the House of Lords, with a curiously stagy effect of light falling across her. Mr. Wyllie in "The Passing of a Great Queen" (272) shows the little *Victoria and Albert* with her escort of torpedo-boats passing down the Solent through the sentinel lines of warships. In the sculpture room is a model (1711) of a memorial to the late Queen to be erected in Manchester. In its present situation it looks, of course, much too big.

The most impressive work in the exhibition is Mr. Sargent's portrait of the two Misses Wertheimer. The one is dressed in crimson velvet and the other in white satin. The picture is so far above any other in the whole exhibition, even including other works by the same artist, that we need say no more than that it is a worthy companion to the portrait of the ladies' father which Mr. Sargent exhibited in 1898. Of medical portraits, that of Dr. P. H. Pye-Smith (525), by Mr. H. J. Draper, should be noticed both as an admirable likeness and a clever study of blacks. In the Lecture Room is a bust (1733) of Dr. Isambard Owen by Mr. W. Goscombe John, and a medal by Mr. C. J. Allen, the obverse of the Kantback memorial medal (1746). This is a departure from the ordinary form of medal in that the head and inscription are within a vesica. Mr. Thomas Brock shows the presentation bust of the late Mr. Henry Lee, F.R.C.S., which is to be placed in the Royal College of Surgeons of England. Of figure pictures the "Venusberg" (794), by the Hon. John Collier, and "When Land and Water Kiss" (845), by Mr. H. J. Draper show a good knowledge of anatomical drawing and modelling. To pass to other pictures Mr. La Thangue's landscapes are, as always, a pleasure to the eye especially. "On Lavington Down" (22), Mr. Waterhouse's "Mermaid" (138) a diploma work, and "Nymphs finding the Head of Orpheus" (231), are good examples of beautiful colour. Mr. Byam Shaw in "The Boer War" (241) has deserted his usual mediæval mysticism and shown us a modern woman standing by a stream. The wealth of detail in the willows, foxgloves, and loosestrife recalls to some extent the "Ophelia" of Millais. Of other landscapes we must mention (638) a view of "Bellagio from Cadenabbia," by Sir Henry Thompson, F.R.C.S., who has deserted his usual medium of water-colour for that of oil. Mr. Ridley Corbet has a charming view of the Val d'Arno (863), and Mr. Albert Goodwin, besides his "Rye" (963), has a beautiful fantasy, "Sindbad the Sailor in the Harbour of Salahut" (784), and his two other pictures (53 and 438), which like all this master's work, should by no means be passed over. We must not forget Mr. Melton Fisher's "Lady

Welby" (367), which is characterised by all his delicacy of handling, and among the sculpture Mr. J. M. Swan's bronze group, "Puma and Macaw," is a wonderful example of stealthy motion.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.

AN ordinary meeting of the Comitia was held on April 25th, Sir WILLIAM SELBY CHURCH, the President, being in the chair.

The following gentlemen, having passed the required examination, were balloted for, and having been elected were admitted as Members:—Francis Robert Bryant Bisshopp, M.A., M.D. Camb.; Frank Cecil Eve, B.A., M.B. Camb.; Archibald Gordon Gullan, M.D. Lond., L.R.C.P.; Edward Forster Maynard, M.D. Edin.; Nathan Raw, M.D. Durh.; Charles Henry Reissmann, M.A., M.B. Camb., L.R.C.P.; and Reginald Cecil Bligh Wall, B.A., M.B. Oxon., L.R.C.P.

Licences to practise were granted to 96 gentlemen who had passed the necessary examinations.

A communication was received from the Secretary of the Royal College of Surgeons of England reporting certain proceedings of the Council on April 11th.

The following Members were nominated by the Council and proposed to the College for election to the Fellowship, and after a ballot had been taken were all duly announced to have been elected: William Burns Beatson, M.D. St. And. (Eastbourne); Arthur Hamilton Nicholson Lewers, M.D. Lond.; John Walter Carr, M.D. Lond.; William Joseph Tyson, M.D. Durh. (Folkestone); Edmund Hobhouse, M.D. Oxon. (Brighton); William Rivers Pollock, M.D. Camb.; Hugh Walsham, M.D. Camb.; Walter Sydney Lazarus-Barlow, M.D. Camb.; Edmond Fauriel Trevelyan, M.D. Lond. (Leeds); John Hannah Drysdale, M.D. Camb.; Frederick Eustace Batten, M.D. Camb.; Raymond Henry Payne Crawfurd, M.D. Oxon.; John Henry Bryant, M.D. Lond.; and George Frederic Still, M.D. Camb.

A report, dated March 11th, was received from the Committee of Management. Amongst other matters the announcement was made that the Blackburn Technical College had been added to the list of institutions recognised for instruction in chemistry, physics, and practical chemistry.

A report was received, dated March 8th, from the Laboratories Committee recording the general work of the laboratories and of the bacteriological department, and announcing that Dr. T. Grigor Brodie had been appointed director of the laboratories for another year. The report was adopted.

The quarterly reports of the Finance Committee and of the examiners for the licence were received and adopted.

The REGISTRAR moved that By-law CXLV. be amended in the manner of which notice had been given at the preceding Comitia. This was carried.

A list of books and other publications which had been presented to the library during the past quarter was received and the thanks of the College were given to the donors.

It was announced that the subject of the Bradshaw lecture to be delivered by Dr. Judson Bury would be "Prognosis in Relation to Disease of the Nervous System."

The PRESIDENT then dissolved the Comitia.

CHURCH MISSIONARY SOCIETY.—The annual meeting of the friends of the medical mission auxiliary of this society was held at Exeter Hall, London, on April 30th, when Sir John Kennaway presided. Dr. Herbert H. Lankester, the secretary, reported that during the year the beds in the society's hospitals had increased from 1484 to 1613; the in-patients from 11,400 to 11,837; and the out-patients from 630,000 to 753,000. A medical training home for ladies had this year been opened in Bermondsey. The income of the auxiliary had risen from £10,600 to £12,930, besides £2737 brought forward and £3797 from the Centenary Fund. The expenditure had been £17,962, but the debit balance was only £484. The committee had undertaken to maintain all the society's medical missionaries, and this would mean an increase of £5000 a year in financial liability.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Cambridge Urban District.—An outbreak of diphtheria occurred in this and the adjoining district of Chesterton during the autumn of 1900, and although there was nothing of an exceptional character about the outbreak certain of the methods adopted with a view to control it were conceived and carried out in a commendably modern spirit. The outbreak, which embraced 62 cases and which was mainly connected with the Park-street Infant School, commenced on Oct. 14th and lasted until Nov. 15th. With respect, however, to the precise number of cases Dr. Bushell Anningson, the medical officer of health, observes that some cases were notified on clinical symptoms alone, notwithstanding the fact that the specific bacillus was not found in the throat, while others were notified upon the discovery of the specific bacillus alone even if no clinical symptoms were present. In other cases, however, the diagnosis was supported both clinically and bacteriologically. Evidence as to the precise cause of the outbreak is not forthcoming, but a thesis of unrecognised cases operating in a school affords a substantial solution of the difficulty. Moreover, the sanitary condition of the closets and urinals was unsatisfactory and may have brought about a state of the fauces susceptible to the operations of the bacillus of diphtheria. As regards preventive measures, Professor Sims Woodhead was appointed consulting bacteriologist, and the invaded school was closed. Isolation accommodation was provided separately both for cases of actual diphtheria and for cases in which the bacilli of the disease alone had been found. Moreover—and here we have the up-to-date nature of the prophylactic measures—the infants who had been attending the invaded school were visited at their homes, a bacteriological examination was made in each case, and a prophylactic injection of antitoxin was offered not only to the infants but also to their younger brothers and sisters. It is of considerable interest to learn that the offer was, as a rule, accepted, and such acceptance does great credit to the tact of those whose duty it was to make the offer. But the liberality of the Cambridge Corporation did not stop here, as the medical practitioners of the borough were afforded a gratuitous supply of antitoxin and facilities for obtaining a bacteriological examination of any suspicious cases under their care. Good results appear to have followed the use of antitoxin in the case of children who had attended the invaded schools, and consequently the corporation instituted a public injecting station at the Corn Exchange whereat all parents whose children had been exposed to infection were at liberty to have them treated with antitoxin free of charge. As regards the bacteriological aspects of the outbreak, Dr. Anningson reports that a total of 650 persons had their throats examined, and of this number 33 yielded the bacillus of the first degree of virulence and 157 that of the second degree. The remainder gave negative results. Dr. Anningson is to be cordially congratulated upon the comprehensive and modern measures which were taken in Cambridge to stay the outbreak, and it is clear, as indeed he fully recognises, that all the parties concerned must have worked with a remarkable unanimity.

Middlesbrough Urban District.—This borough has for the last five years suffered severely from pneumonia of a definitely infective type and it will be remembered that Middlesbrough was the scene of the historical outbreak of epidemic pneumonia which took place in 1888 and which was investigated by Ballard and Klein. At that time there were 388 deaths. Klein found a bacillus which he called "bacillus pneumoniæ," the inoculation of which into mice gave rise to a disease in which pneumonia was a very prominent symptom. This same bacillus was found in certain samples of bacon, and mice fed thereon developed pneumonia and yielded the bacillus pneumoniæ. During 1900—the estimated population being 97,007—there were no less than 543 deaths from pneumonia, the annual numbers since 1896 having been 275, 265, 225, and 397. It has, however, to be remarked as having a bearing upon the figures for 1900 that in May of that year the Town

Council made pneumonia a voluntarily notifiable disease, although it appears that the stress of the 1900 outbreak was over before notification commenced. The number of cases notified since May was 187—i.e., 138 males and 49 females. Of the total of 187 no less than 71 died—a fatality rate of 37·9—which was much in excess of that which obtained in 1888. As in 1888, males were more liable to attack than females. The bacteriological portion of the investigation was performed by Mr. Alexander Foulerton, who was unable to discover the presence of the diplococcus pneumoniæ in any of the cases, but he is inclined to regard an organism which he names "Middlesbrough bacillus No. 2" as having played an important part in the outbreak. In the words of Mr. Foulerton, "this 'Middlesbrough bacillus No. 2' proved to be identical in every way with what is recognised as bacillus coli communis and appeared to be quite normal in type." With regard to the bacteriological aspect of the question, Dr. Charles V. Dingle, the medical officer of health of Middlesbrough, observes: "The results obtained cannot be said to be conclusive proof that the above bacillus is the only cause of the excessive pneumonia met with in this borough, and it is hoped that further and more conclusive evidence will be obtained in future." As matters stand the bacteriology of epidemic pneumonia must be regarded as being in a somewhat evolutionary phase. As far as we can gather the results of Mr. Foulerton's investigations agree with Klein's in that in no case was Friedländer's or Fränkel's pneumococcus discovered, but we are not told whether "Middlesbrough bacillus No. 2" is claimed to be identical with Klein's bacillus pneumoniæ.

Stoke-upon-Trent Urban District.—Dr. G. Petgrave Johnson reports that during 1900 there were two deaths in this district from the consumption of veal. This meat, procured on a certain Saturday, was stuffed with herb and eaten hot on the following Sunday at the midday meal. At supper on the same day nine persons partook of the cold meat and one additional person abstained. The next day seven of the nine veal-eaters were attacked with vomiting, diarrhœa, and abdominal pains. On the evening of the same day a visitor had a piece of the same cold veal and was ill on the day following. The history of the veal was inquired into and it appears that none of the other eaters of meat from the same calf were taken ill. Dr. Johnson thinks that the meat was contaminated after it had been cooked, seeing that those who ate the hot meat were not attacked. It does not seem that any bacteriological or inoculation experiments were made, and this, under the circumstances, is to be regretted. Cases of this nature, investigated in a bacteriological sense quite early, are likely to lead to instructive results, as has been shown by Durham and others. The borough of Stoke-upon-Trent is without a disinfecting apparatus, and therefore, as the medical officer of health remarks, it has been impossible to disinfect any infected clothing or bedding. In 1886 Dr. Barry of the Local Government Board advised such an apparatus, and the medical officer of health has frequently reported in the same strain, but the district council has remained obdurate.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 33 of the largest English towns 6671 births and 4047 deaths were registered during the week ending April 27th. The annual rate of mortality in these towns, which had been 19·2, 19·2, and 18·4 per 1000 in the three preceding weeks, further declined to 17·9 per 1000 last week. In London the death-rate was 17·4 per 1000, while it averaged 18·2 per 1000 in the 32 large provincial towns. The lowest death-rates in these towns were 10·3 in West Ham, 11·4 in Derby, 11·7 in Brighton, and 11·8 in Birkenhead; the highest rates were 22·8 in Liverpool, 24·4 in Halifax, 24·8 in Bolton, and 26·1 in Plymouth. The 4047 deaths in these towns included 363 which were referred to the principal zymotic diseases, against 397 and 346 in the two preceding weeks; of these, 122 resulted from whooping-cough, 101 from measles, 48 from diphtheria, 36 from diarrhœal diseases, 30 from scarlet fever, and 26 from "fever" (principally enteric). No death from any of these diseases was registered last week in Burnley; in the other towns they caused the lowest death-rates in Croydon, Plymouth, Norwich, Derby, Birkenhead, and Huddersfield, and the highest rates in Bolton, Salford, Blackburn, and Sunderland. The greatest mortality from measles occurred in Wolverhampton, Bolton, Sunderland, and Gateshead; from scarlet fever in Preston; from whooping-cough in Bristol, Cardiff, Swansea, Bradford, and Sunderland; and from "fever" in Blackburn and Sunderland. The 48 deaths from diphtheria included 20 in London, four in Salford, four in Leeds, and three in Liverpool. No fatal case of small-pox was registered in any of the 33 large towns; and no small-pox patients were under treatment in any of the Metropolitan Asylums hospitals during last week. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of the week was 1522, against 1601 and 1526 on the two preceding Saturdays; 198 new cases were admitted during the week, against 180, 205, and 150 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 345 and 374 in the two preceding weeks, decreased again last week to 286, and were 71 below the corrected average. The causes of 46, or 1·1 per cent., of the deaths in the 33 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Nottingham, Salford, Bradford, and seven other smaller towns; the largest proportions of uncertified deaths were registered in Liverpool, Blackburn, Halifax, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 24·1, 23·2, and 23·0 per 1000 in the three preceding weeks, further declined to 22·9 per 1000 during the week ending April 27th, but showed an excess of 5·0 per 1000 over the mean rate during the same period in the 33 large English towns. The rates in the eight Scotch towns ranged from 11·8 in Perth and 18·8 in Dundee to 23·7 in Glasgow and 24·5 in Edinburgh. The 717 deaths in these towns included 62 which were referred to whooping-cough, 25 to measles, 13 to diarrhœa, eight to scarlet fever, five to "fever," four to diphtheria, and three to small-pox. In all, 120 deaths resulted from these principal zymotic diseases last week, against 95 and 117 in the two preceding weeks. These 120 deaths were equal to an annual rate of 3·8 per 1000, which was 2·2 per 1000 above the mean rate last week from the same diseases in the 33 large English towns. The fatal cases of whooping-cough, which had been 51 and 56 in the two preceding weeks, further rose last week to 62, of which 34 occurred in Glasgow, 18 in Edinburgh, five in Dundee, and four in Paisley. The deaths from measles, which had been 16, 17, and 21 in the three preceding weeks, further rose to 25 last week, and included seven in Glasgow, seven in Leith, six in Edinburgh, three in Paisley, and two in Greenock. The fatal cases of diarrhœa, which had been eight, 13, and 23 in the three preceding weeks, declined again last week to 13, of which seven were registered in Glasgow, three in Dundee, and two in Aberdeen. The deaths from scarlet fever, which had been three and two in the two preceding weeks, rose again to eight last week, and included four in Glasgow. The fatal cases of "fever," which had been one and four in the two preceding weeks, further rose last week to five, of which three occurred in Glasgow, where two of the four deaths from diphtheria were also registered. The fatal cases of small-pox, which had been five, six, and 10 in the three preceding weeks, declined again last week to three, and all occurred in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had increased from 155 and 130 in the two preceding weeks, rose again last week to 179, and showed an excess of 38 over the number in the corresponding period of last year. The causes of 36, or more than 5 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 35·6 and 35·4 per 1000 in the two preceding weeks, further declined to 29·4 during the week ending April 27th. During the past four weeks the death-rate in the city has averaged 33·1 per 1000, the rates during the same period being 17·7 in London and 23·2 in Edinburgh. The 195 deaths of persons belonging to Dublin registered during the week under notice were 40 less than the number in the preceding

week, and included 10 which were referred to the principal zymotic diseases, against 12, 15, and 18 in the three preceding weeks; of these, eight resulted from whooping-cough, one from scarlet fever, and one from "fever." These 10 deaths were equal to an annual rate of 1·5 per 1000, the zymotic death-rate during the same period being 1·6 in London and 4·4 in Edinburgh. The fatal cases of whooping-cough, which had been five, eight, and nine in the three preceding weeks, declined again last week to eight. The mortality both from scarlet fever and from "fever" showed a decline from that recorded in the preceding week. The 195 deaths in Dublin last week included 27 of children under one year of age and 56 of persons aged upwards of 60 years; the deaths both of infants and of elderly persons showed a slight decrease from the respective numbers registered in the preceding week. Six inquest cases and four deaths from violence were registered; and 61, or nearly one-third, of the deaths occurred in public institutions. The causes of six, or more than 3 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeon W. E. Breton to the *President* for a three months' course of hospital study. Staff Surgeons: V. G. Thorpe, to the *Centurion* for service with the Marines at Wei-hai-wei, and P. E. Maitland to the *Argonaut*. Surgeons: J. G. Corry to the *Niobe*; J. W. Craig to the *Northampton* for the *Calliope*; T. W. Kemp to Bermuda Hospital; E. O. B. Carbery to the *Jackal*; W. R. Knightley to the *Duke of Wellington*, for disposal; J. H. Fergusson to the *Harrier*; A. G. W. Bowen to the *Beagle*; H. E. Tomlinson to the Plymouth Division, R.M.L.I., and Civil Practitioner W. Martin to be Surgeon and Agent at Port Muck.

ROYAL ARMY MEDICAL CORPS.

Major G. Brazier-Creagh joins at Woolwich. Major A. M. Davies is ordered to join the Home District for duty. Major A. Dodd has joined at Aldershot for duty at the Cambridge Hospital. Captain H. A. Stalkartt is appointed for duty in the Scottish district.

The undermentioned Lieutenant-Colonels, whose promotions were notified in the *London Gazette* of March 29th, 1901, take precedence next below Lieutenant-Colonel W. C. T. Poole: Richard Edward Ricketts Morse, Richard Henry Stewart Sawyer, and Richard Charles Kirby Laffan.

Lieutenant-Colonel Arthur Bowdich Cottell retires on retired pay. Colonel Charles Fleetwood Churchill is placed on retired pay. Lieutenant-Colonel Robert Talbot Beamish is placed on retired pay.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain W. K. Bullmore having resigned his Volunteer appointment, ceases to belong to the Army Medical Reserve of Officers. Surgeon-Lieutenant Herbert Fox, 2nd Hampshire Volunteer Artillery, to be Surgeon-Lieutenant.

INDIA AND THE INDIAN MEDICAL SERVICES.

The King has approved of the following promotions among the officers of the Indian Medical Service:—Lieutenants to be Captains: Thomas Henry Delany, John Walter Forbes Rait, Stewart Ranken Douglas, Eugene John O'Meara, Godfrey Tate, Roy Fearon Baird, Andrew Thomas Gage, George Campbell Laing, George McPherson, Spencer Hunt, Alfred George Sargent, Walter Hulbert Cox, De Vere Condon, Henry Albert John Gidney, Henry Kirkpatrick, Frederick Durand Stirling Fayrer, Padmahar Krishna Chitale, and William Lethbridge. The King has also approved of the transfer to the half-pay list of Major William Grant Thorold and Captain Hugh Bixby Luard. The King has also approved of the retirement from the service of Lieutenant-Colonel Percy de Haga Haig and Lieutenant-Colonel Edward Palmer.

VOLUNTEER CORPS.

Artillery: 1st Hampshire (Southern Division Royal Garrison Artillery): Alexander Arthur MacKeith to be Surgeon-Lieutenant. *Rifle:* 1st Volunteer Battalion the Dorsetshire Regiment: Surgeon-Captain A. Emson resigns his commission.

VOLUNTEER MEDICAL STAFF CORPS.

The Woolwich Companies: The undermentioned gentlemen to be Surgeon-Lieutenants: Charles Theodore William Hirsch and Ernest Blair Dowsett.

SOUTH AFRICAN WAR NOTES.

Major Cummins, R.A.M.C., Lieutenant Taylor, R.A.M.C., and Civil Surgeons Edwards, Hinde, Gardner, and Baskin are returning home in the s.s. *Montrose*.

Civil Surgeon George Sowden is reported to be suffering seriously from enteric fever (Beaufort, April 21st).

A final meeting of the committee of the Portland Hospital was held on April 27th, when the printed report which had been compiled by a sub-committee was approved. It was resolved that a copy should be presented to each subscriber and that any officer or soldier who had been a patient in the hospital should have the privilege of purchasing a copy at cost price. 3*s*., on application to the secretary, Major General the Hon. H. F. Eaton, 43, Upper Grosvenor-street, W.

The Imperial Yeomanry Hospital at Deelfontein has now been taken over by the Government.

RECRUITING.

The annual report of the Inspector-General of Recruiting, which has just been issued, shows that the total result of recruiting for the past year amounted to 49 260 men for the regular forces and 37,853 for the militia. The proportion of well-educated men who enlisted in the army during the past five years has risen from 69 to 83 per 1000. It is from this class that the best non-commissioned officers are drawn. A considerable number of men are always forthcoming in time of war, as in the case of that in South Africa, for temporary service in an emergency. The highest number of recruits raised for the regular army since the introduction of the short-service system, we learn from the report, was 42,700, obtained in 1899, but that number was more than doubled last year. But the problem that has to be solved is how a sufficient number of recruits are to be obtained in the absence of this war fever, and especially for the maintenance of the increased establishment of the regular army in time of peace. There is no end to the suggestions that have been made for popularising the army and for attracting young men into it without incurring the great outlay which would be entailed by increasing the soldiers' pay so that the army should offer as good a wage as can be had in other sources of labour in civil life outside it. This question of pay is, no doubt, and always has been, one of the radical difficulties in the matter. But it is not everything. In this age of advertising there is not sufficient done to attract men into the army. Our recruiting depôts do not occupy sufficiently public and prominent positions nor are the buildings used for the purpose of the right kind. Buildings intended for recruiting purposes should occupy sites in good open thoroughfares and not be hidden away in back streets and they should be of a superior description to those now provided. Any intending army recruit should have every facility for obtaining all the information he requires at such places. Judging from all that we have heard we should say that the disinclination to enlistment commonly arises from a feeling that the soldier has to forfeit his liberty and that apart from drills, he has to subject himself to a number of irksome disciplinary details many of which seem to him unnecessary. The young soldier of the present day does not care to be treated like an overgrown schoolboy; he wants greater personal freedom and fewer restrictions than are imposed by our traditional military system. Moreover, the soldier is not satisfied with the system of military stoppages to which he is subjected and we believe that he does not so much desire to have cubicles introduced into barrack rooms as to have these rooms better warmed and lighted in winter and to have more comfortable bath-rooms with warm water laid on.

AHMEDNAGAR.

A good deal of objection has been taken to Ahmednagar as a station for the occupation of Boer prisoners transferred from South Africa to India on the ground of its alleged unhealthiness. Ahmednagar is pretty well known as one of the best and most salubrious stations in the Bombay Presidency. It is situated on the high tableland of the Deccan, and has an excellent climate. To compare Ahmednagar to a sort of Devil's Island to which Dreyfus was banished, as we have somewhere seen done, is absurd. The medical history of the European troops stationed at

Ahmednagar has been satisfactory. We believe that in 1898-99 there were some complaints regarding the water-supply, which has no doubt been since remedied. It is possible, of course, that typhoid fever is not an unknown disease there, but then it would not, unhappily, be easy to name offhand a military station in India or a hill station to which our troops are sent for health that had always been free from enteric fever. And the same thing may be said of South Africa, for we have all had bitter experience during this war of the havoc which this fever has caused among our troops serving there.

IMPROVED MILITARY AMBULANCES.

The present type of military ambulance was condemned by the Royal Commissioners who reported on the care and treatment of the wounded in the South African war, and as a consequence the Master of the Worshipful Company of Coachmakers, who is a colonel in the Honourable Artillery Company, recently offered three prizes for improved designs in ambulances, the principal objects being to reduce the weight and at the same time to increase the ease of carrying and the capacity. The competition has proved most successful and the judges, who have been assisted by an aide-de-camp to Lord Roberts, have awarded the first and second prizes to Messrs. Atkinson and Philipson, carriage manufacturers, Newcastle. One of their draughtsmen, Mr. Terry, gained the first prize, Mr. John Philipson won the second, while the third went to Mr. Butler of the London Polytechnic Carriage Building Class. The drawings can be seen at the Baker-street Carriage Bazaar.

LEAN'S ROYAL NAVY LIST.

The ninety-fourth quarterly issue of this excellent publication, containing information with regard to the war and meritorious services of officers in the Royal Navy, names of famous battleships, dates of all commissions, dates of all retirements, lists of Royal Orders, medals, decorations, honours &c., Gazette accounts of the Victoria Cross, names of recipients of the Albert Medal, and the societies' medals; dates of birth of flag officers, captains, and officers of Royal Marines; lists of Fellows of the learned societies, private appointments held by retired officers; the causes of special promotion, prizes, and examinations passed, with the relative army rank and time of compulsory retirement, at head of each rank; lists of ships building, &c., has just been issued. The present issue contains a reproduction from an original drawing of Queen Victoria by Paul Raphael Montford. Messrs. Witherby and Co., 326, High Holborn, and 4, Newman's-court, are the publishers.

"SELF-AID IN WAR."

Surgeon-Major T. F. S. Caverhill, of the Lothians and Berwick-hire Yeomanry Cavalry, has just issued under this title, at the price of 1s., an enlarged edition of a little book which should prove useful to the private soldier and to the regimental stretcher-bearer. It has special application to cavalry and mounted infantry. The publishers are Messrs. Williams and Norgate of London and Oxford.

ROYAL NAVAL SUPPLEMENTAL FUND.

At the quarterly meeting of the directors of the Naval Medical Supplemental Fund, held on April 16th Sir J. N. Dick, K.C.B., being in the chair, the sum of £63 was distributed among the several applicants.

THE AFTER-CARE ASSOCIATION.—The report of the council of this association for 1900 states that the past year has been a most encouraging one. The number of poor persons discharged recovered from asylums for the insane dealt with by the association are as follows. During the past 12 months there were 195 cases before the council—not quite so many as in 1899 but the number successfully helped was greater in this than in any previous year. Of these 132 were women and 63 were men. Many have been assisted as in the past by being boarded out in cottages in the country, by grants of money and clothing, by finding them occupation, and in other ways as the council have thought best. Others have had to be declined as it was thought after most careful consideration that they would never again be fit for the struggle of life. The total amount of subscriptions and donations for maintenance in 1900 came to £540 13s. 11d. In 1899 they were £549 8s. 1d. Communications should be addressed to the Secretary, Church House, Dean's-yard, Westminster.

Correspondence.

"Audi alteram partem."

"REORGANISATION OF THE ARMY MEDICAL SERVICE."

To the Editors of THE LANCET.

SIRS,—I am, of course, quite aware that the highest qualification for planning reforms in the Army Medical Department is to be either a civil surgeon with comparatively small experience in matters military or a combatant officer with no experience in matters medical. Nevertheless, I would suggest that it might be worth while to pretend to think that the members of the Royal Army Medical Corps are themselves qualified to form useful opinions about their own concerns. I am, I need scarcely explain, not so foolish as to really think they are.

This proposal may have increased weight if I prove at once that they emanate from a person without bias in favour of the army medical officer. What is that gentleman? In the first place, he is one who has craved for and got such titles as "Colonel" and "Captain," "with the hope of being mistaken for" that which he is not. "Navalis," a few days ago, pointed out in the *Times* this motive in reference specially to naval engineers, but it is evident he regards as being "in the same boat" all non-combatants who wish to have the titles supposed (erroneously) to belong only to combatants. Now the frequent letters of "Navalis" to the *Times* always appear in the largest print. Their intrinsic merits are inferior to those of most of the letters which that journal presents in small print. It is certain, therefore, that he is a man of position who would, of course, judge in a generous and gentlemanly spirit of the motives of other people. Analogous views used to be held, perhaps are still held, by many combatant military officers about military titles for the Royal Army Medical Corps. It is obvious, therefore, that the army doctor is a snob—a person who has assumed certain titles "in order that he may be mistaken for something else."

Secondly, owing to the absence of competition, medical men who enter the army are of inferior knowledge, industry, and capacity. This deduction and this assertion have been made so often that they must be true. In confirmation of the above views I can give my personal experience at the Post-graduate College of the West London Hospital. Of late years dozens of medical officers of the Army and Indian Medical Service have attended there. I have found them quite different from the truthful sketch I have just given. If one exception prove a rule, in the remarkable case of the Royal Army Medical Corps, in which all the individuals appear to be exceptions, the rule must be proved to absolute demonstration—this said rule being that the army medical officer is a snob and an incompetent, idle fellow.

What I advocate is that we should dissemble, that we should make a pretence of *attacking weight to his own ideas of how to improve himself, and then urge the Government and others to help to develop these ideas.* The true ideas of the army medical officer may be inferred from his conduct. He is constantly seen by us behaving as follows. If he has the opportunity he spends a portion of his time diligently attending a post-graduate hospital, working much in the same way as if he were a third-year student. He is not only ready, but eager, to hold a limb, to retract, or to sponge. He is often of high rank, and at first I felt it rather odd to be directing "Colonel" this or "Major" that in student's duties. But his zeal and good manners soon banished that feeling and I now simply have a higher respect for military titles than I ever had before.

The army medical officer's view is that he needs courses of practical work in civil hospitals, and especially in those which grant him a recognised position and duties and where there are no unqualified students for him to interfere with. He follows out this view with a modesty which contrasts agreeably with the tone of those who patronise him and of those who libel him. It will be remembered that a Member alleged in Parliament that the three principal medical officers in Natal had done no good work because they had been so absorbed in strutting about enjoying their military titles. Sir Redvers Buller himself repelled this slander. One of the three Royal Army Medical Corps colonels thus

libelled used, while stationed at Aldershot in 1899, to come to the West London Hospital and work in the manner I have sketched above, and that in spite of the long railway journey. Such men deserve that their own modes of improving themselves should be assisted and developed. This policy could be carried out at the West London Hospital. With encouragement and financial assistance from Government that institution could easily be doubled in size. The two senior assistant physicians and the two assistant surgeons could be promoted to the full staff and no more *civilian* assistant physicians or surgeons be elected. The duties they perform at present should be intrusted to selected men from the Royal Army Medical Corps, each appointed for 12 months, for six as junior and for six as senior. The duties of such a military assistant surgeon would be as follow. During his six months as junior he would assist his surgeon at operations, diligently follow his practice, and on two days a week attend out-patient practice. During his six months as senior he would take charge of out-patients on one day a week and be allowed himself to perform major operations of which he would get a considerable number. But as he would only have this responsible work for six months it should be performed under the superintendence of the permanent surgeon. I do not mean the actual eye of the surgeon. I will give a concrete example. Suppose my military assistant surgeon wished to operate for a strangulated inguinal hernia or to perform an amputation through the knee I should consent; but if he asked me to authorise him to attempt the removal of a calculus from the common bile-duct I should consider what previous experience he had had of such surgery and probably end by taking that case myself and giving him a more suitable one in exchange. But my experience of military post-graduates is that what they generally require in civil hospitals is not snubbing but encouragement. So also there should be a permanent civil out-patient physician and out-patient surgeon who should attend five afternoons a week and be ready for consultation. They should be paid for this work. But their chief inducement would be that each would stand first for the next vacancy for physician or surgeon. The first to fill these offices would be the present juniors.

With regard to expense the management would not need complete endowment from Government, but *backing up*. Hospital beds in London, to a great extent, support themselves. In this way 10 military assistant physicians and 10 military assistant surgeons would pass through a hospital of 320 beds every year—i.e., 200 every 10 years; and there would besides be room for a number of clinical clerks and dressers. It is true that no one can be a good practical physician, still less a good practical surgeon, who has not *recently* been engaged in practising his art. Still, it would be a gain to the Army Medical Department to have available 50 or 60 picked men who had each of them less than two or three years previously spent a year as assistant surgeon in a metropolitan hospital.

I am, Sirs, yours faithfully,

Grosvenor-street, W., April 30th, 1901. C. B. KEETLEY.

To the Editors of THE LANCET.

SIRS,—I have read with interest the article in THE LANCET of April 27th, p. 1224, on the reorganisation of the Army Medical Service. The main point, however, is to get the men. If that is done many of the reforms you suggest will come of themselves. There are three things which attract men to enter a public service—honour, power, and pay. Given the first two and the third may be comparatively very small. At present all three are lacking, so is it wonderful that candidates are lacking also? There seems to me to be a very good reason why the first two—viz., honour and power—are not accorded with as free a hand as might be to the army medical officer. The combatant officer cannot get out of his head that the army surgeon is simply a civilian in uniform. Can this defect—granted that it is a defect, and I think it is—be remedied? I think it can. Let there be an army medical school to be entered in the same way as Woolwich or Sandhurst is entered, by a competitive examination in arts, and let this school undertake the military and medical training of its students. Let the school be in London, Edinburgh, or where you will, and let the examinations, which, of course, must be such as are recognised by the General Medical Council, be what you will; let the students include the navy and the Indian Medical Service or not, as you please; let it be attached to a large hospital or have its own teaching staff—these, as well as many other points, would require far more space than I can venture to trespass on, but let the students be under military discipline from the very first—that is the point which I wish to emphasise. On becoming legally qualified I would grant them commissions and second a certain number for the purpose of taking up house surgeoncies or while reading for higher examinations. Thus officers would not lose seniority by zeal for their profession.

I have not gone into the question of expense or how much of it should be borne by the student, how much by the State. That, again, is, I think, a matter of detail, but I feel sure that if some such college were started you would get the right sort of candidate to enter it—viz., the student whose ambition it was to be an army medical officer—not, as now often happens, the qualified man who enters the army for want of something better to do.

I am, Sirs, yours faithfully,

April 28th, 1901. R.A.M.C.

"POST-PARTUM HÆMORRHAGE."

To the Editors of THE LANCET.

SIRS,—I, in common, no doubt, with very many other general practitioners, have read Mr. E. Stanmore Bishop's lecture on post-partum hæmorrhage in THE LANCET of April 13th, p. 1069, with great delight, and the result has been that we doubtless shall attempt aortic compression in a like emergency, not as a last resource, but as an adjuvant to other remedies mentioned in text-books. Mr. Bishop quotes Cazeaux, who, I gather from his lecture, thinks somewhat lightly of this means of arresting hæmorrhage. I turned to my Cazeaux ("Traité Théorique et Pratique de l'Art des Accouchements," Paris, 1856), and on pages 932, 933, and 934 I found a totally different statement with regard to the employment of aortic compression. I was so struck with it that I translated the pages mentioned, and I now forward the translation on to you. I will not say that the translation is good, but I think it is fairly correct, and one can see from it that Cazeaux had ideas with regard to aortic compression in 1856 which are not very far removed from those of Mr. Bishop, allowing, of course, for the increase of general scientific knowledge since then. The objections to aortic compression you will see were made by others, and Cazeaux, in my opinion, gives a complete answer to them. You will notice that there is no mention of the faradaic current or of any styptic solution or injection, and they are not even mentioned at all in this edition, as the author, after saying that opium has been suggested by English writers to cause contraction, and after rejecting the idea and having spoken about ergot and been strongly in favour of its use, passes on to transfusion of blood (pp. 934, 935). On one point he differs from Mr. Bishop—all his efforts are for contraction of the uterus, but still he approaches him again when he advises aortic compression lasting for some time, in order that the brain and spinal cord may have enough blood to keep the heart and respiration going. What I should like to know is whether a good old book, such as my 1856 edition certainly is, has been brought up to date and completely spoilt. Hoping you will be able to find space for this somewhat lengthy letter, I am, Sirs, yours faithfully,

ALFRED HUNTSMAN, L.S.A.

St. John's-road, Upper Holloway, N., April 26th, 1901.

TRANSLATION.

M. d'Ornellas has lately sustained a thesis on aortic compression employed in uterine losses. He brings forward many observations as to its application. M. Baudeloeque himself has assured me that he has several times succeeded in stopping losses, which from the appearance would seem likely to end quickly in death. This doctor, who contests with Dr. Trehan the honour of being the first to revive aortic compression, seems to have great faith in the efficacy of this method. A great many facts militate to-day in favour of his opinion. This is how M. Baudeloeque, the nephew, advises compression to be made: "Flex the body and legs of the woman on the pelvis, depress, with the four last fingers of one hand, the abdominal wall, immediately above the fundus uteri, you feel the pulsations of the aorta more easily even than one can feel those of the radial. The duration of the compression may last for some considerable time without the woman experiencing any inconvenience." M. Baudeloeque says he has practised it during a period of more than four hours. This compression is considered by its author himself only as a means of gaining time. He administers almost immediately the "ergot potion" whose action soon determines uterine contraction. Aortic compression, advised some time back, had been generally abandoned because the methods of procedure were essentially bad. Some wished to compress it through the abdominal wall and both walls of the uterus; others would introduce the hand into the uterine cavity itself, and would compress the vessel

through the posterior wall of that organ. Both these procedures, which are opposed to uterine contraction, ought to be rejected. In spite of the numerous successes which have been attributed to it, several authors, and M. Jacquemier especially, contest the utility of it, and go even so far as to consider it harmful. "In great losses which follow accouchement the blood which escapes," says M. Jacquemier, "comes in a great measure from the veins; and compression of the arterial trunk can only favour the reflux of venous blood into the vena cava and its tributaries." Without doubt the utero-placental arteries would not be able to furnish the enormous quantity of blood that a woman just confined sometimes loses in a few moments, and certainly this blood escapes in great measure from the large venous mouths which the detachment of the placenta leaves gaping on the internal surface of the uterus. While agreeing with M. Jacquemier as to this fact, I differ with him as to the conclusion he draws from it. Such are, indeed, the relations of the aorta and vena cava, that it is almost impossible purposely to make compression of the one without compressing the other at the same time. I agree willingly that one is deceived as to the nature of good that one does, and that one should attribute to the flattening of the vein what one boasts of in compressing the aorta; but what does it matter when the practical result—the arrest of the hæmorrhage—is none the less the consequence. M. Jacquemier has done a true service in calling attention to a theoretical error, but I would almost blame him for doing so, if he deprived the practitioner of a last precious resource. I accept, then, M. Jacquemier's theory, but I shall nevertheless continue to compress the aorta, although convinced that at the same time I shall compress the vena cava. Still another objection has been made. Aortic compression, says one, greatly hinders the blood from arriving by the uterine arteries, but it ought necessarily to augment the quantity which arrives by the ovarian, for it is usually performed below the origin of these latter. The objection loses much of its weight since the hæmorrhage is chiefly venous. Out of four arteries which supply the blood two only are patent after aortic compression. It is then a marked advantage. M. Jacquemier considers as useless and irrational the use of ergot while one is using compression. "How can one admit," says he, "that this agent, whose effects are rapid but transitory, can set up stimulation of the uterus when arterial blood has ceased to come there" It is chiefly in acting upon the nerve-centres and in awaking the excito-motor action of the uterine nerves that the drug exercises on the uterus the special action that one recognises in it. To believe that, after having been absorbed in the stomach, the drug, carried in the circulatory current, only acts when it comes in contact with uterine tissue, is, I believe, to admit a physiological error Up to now the compression of the aorta has only been advised with the aim of checking the escape of blood and to give time for the action of more direct means for awaking uterine contraction. I believe that it can be of great use even after the arrest of the loss and the contraction of the uterus. In cases, indeed, where the loss has been considerable, all danger is not over when one has succeeded in stopping the hæmorrhage and in determining the contraction of the organ of gestation. Even though not a drop of blood any longer escapes, the amount of this fluid remaining in the body is no longer enough to distribute to all the organs at the same time as to the brain the stimulus requisite to maintain the integrity of their functions, and women sometimes succumb two or three hours after the arrest of the loss, death supervening then because the bulk of the blood is spread equally over the whole area of the circulatory system and because the brain and spinal cord in particular, receiving only a very small portion, lack the stimulus necessary for them to carry on the respiration and likewise the movements of the heart. This being admitted, it is easy to understand that if in compressing the abdominal aorta, one prevents the blood thrown out by the left ventricle from descending into the lower limbs and the abdominal viscera, one would necessarily force it to flow towards the brain in a greater quantity and one will preserve thus for this organ the stimulus which it requires in order to react, in its turn, on the functions of the heart and lungs. In placing the woman on an inclined plane so that the head occupies the lowest part, one will powerfully assist aortic compression. I think then that compression of the aorta and of the vena cava is useful, while the loss is abundant, but that in cases where the patient has lost a large quantity of blood it ought to be kept up for several hours after the arrest of the hæmorrhage and complete retraction of the uterine walls; only in this last case it is requisite to isolate the aorta from the vena cava, so as to exercise compression only on the former of these vessels.

HOUR-GLASS STOMACH.

To the Editors of THE LANCET.

SIRS,—Since reading the proof of my paper on "Hour-glass Stomach"[1] I have found the record of four cases operated upon by Professor Bier of Kiel. The cases are related in an "Inaugural Dissertation" by Eduard Asbeck, entitled "Vier Fälle von Sanduhrmagen und ihre operative Behandlung." The details are as follows:—

Case 1.—A female, aged 51 years. Ten years' history of stomach trouble, loss of weight, pain, and vomiting, but never hæmatemesis; gastroplasty. The ulcer was near the lesser curvature, the cardiac complement much dilated, and the pyloric normal. Recovery followed the operation.

Case 2.—A female, aged 29 years. Stomach troubles since 10 years old. Hæmatemesis two years ago; constant pain since. The stomach was dilated to three finger-breadths below the umbilicus; resistance was felt above and to the right of the umbilicus. Narrowing of the pylorus was found. Gastro-duodenostomy; death. At the post-mortem examination an hour-glass stomach, the pyloric complement of which had been mistaken for the whole stomach, was found. The stricture between the pouches was at the middle of the stomach, and it permitted the passage of one finger only.

Case 3.—A female, aged 39 years. There had been stomach trouble since childhood, with vomiting, pain, and loss of appetite. Above the umbilicus was an area of resistance and tenderness; the greater curvature descended an inch below the navel. A tumour of the size of a hen's egg was found in the middle of the stomach, adherent to the anterior abdominal wall. The tumour was excised and was found to consist of induration round a chronic ulcer. Gastroplasty was performed and recovery followed.

Case 4.—A male aged 56 years. Since 12½ years of age there had been stomach trouble. In the epigastrium there was a tumour of the size of a man's fist. On exploration this was found to be due to adhesion of the stomach and œdema of the anterior abdominal wall. There was an ulcer in the anterior wall between the curvatures which in its contraction had caused an hour-glass stomach. Excision of the ulcer; gastroplasty; death.

I am, Sirs, yours faithfully,

Leeds, April 30th, 1901. B. G. A. MOYNIHAN.

[1] THE LANCET, April 27th, 1901, p. 1190.

"THE ROYAL ORTHOPÆDIC HOSPITAL."

To the Editors of THE LANCET.

SIRS,—In answer to the letter dealing with the proposed sale of the Royal Orthopædic Hospital in THE LANCET of March 23rd, p. 893, and your leading article of April 6th, p. 1025, Mr. H. H. Marks replied on April 20th (p. 1167) accusing a "Hospital Governor" of untruthfulness and of being an enemy of the hospital. He has further made a private communication to you in answer to the arguments against the sale of the hospital. Why should Mr. Marks furnish you privately with information that he denies to the governors of the hospital? Where are the facts and figures in support of his autocratic policy of sale and his detailed criticism of the alternative scheme? For my own part, I can only say that I am prepared to support all statements in my letters except that of the offer of £1200 for the hospital premises on lease, an error which was freely and frankly withdrawn by the senior surgeon to the hospital. The latter gentleman has endorsed my statements, so that Mr. Marks can hardly avoid an answer on the score of anonymous criticism. My card is inclosed and my name is well known to THE LANCET. My name will be forthcoming whenever necessary. It is open to Mr. Marks meanwhile to answer the criticisms of the senior surgeon—if he can.

I am, Sirs, yours faithfully,

London, April 29th, 1901. HOSPITAL GOVERNOR.

"THE MEDICAL PROFESSION AND THE FRIENDLY SOCIETIES."

To the Editors of THE LANCET.

SIRS,—The National Friendly Society proposes to start a branch in the town where I live, the population of which is about 4000. My fellow practitioners and self have been asked to undertake the work. We have agreed to act in unison regarding the matter and are now considering whether to accept or refuse their terms Our objections are: the society has no wage limit; a member need not join up to the full extent of his income; the society's fees are smaller than our usual ones; and the working and agricultural labourers are already well provided for with clubs. We should be glad to have your advice on the subject.

I am, Sirs, yours faithfully,

April 29th, 1901. W. E. T.

*** Mr. E. W. Brabrook in a letter published in our columns last week says that the friendly societies "desire to pay a fair price for the services rendered to them. They are neither beggars nor sweaters. How is the fair price to be ascertained? The medical man is to say, taking the society as a whole, for what sum paid by every member, whether sick or well, he is willing to attend those who are sick." Mr. Brabrook writes as one having authority to control the policy of the friendly societies and we recommend our correspondent and his colleagues to ascertain how far the National Friendly Society will see the situation with Mr. Brabrook's

eyes. It is a great thing that all the medical practitioners of the town have agreed to have a common policy. We recommend that they fix a proper price for which they are willing to attend the proposed new branch and await the result.—ED. L.

To the Editors of THE LANCET.

SIRS,—Mr. Brabrook's letter in THE LANCET of April 22nd, p. 1232, is most valuable and instructive. He not merely implies, but actually states outright, that a medical man's action in "taking a club" is governed by ordinary commercial rules, and is not in any way "charitable." He says of the societies: "They desire to pay a fair price for the services rendered to them. They are neither beggars nor sweaters." This is a *petitio principii* with a vengeance. It is unfortunately also the exact reverse of the facts. When even Mr. Brabrook can fall into such an astounding error, which absolutely destroys the value of an otherwise good letter, what hope is there of conciliation? None, whatever, Sirs, in my opinion. The fight is as inevitable as was the Boer war. The only question for the profession is: Will its members organise and win, or prefer disunion and be beaten in detail?—I am, Sirs, yours faithfully,

April 29th, 1901. EXPERIENCE.

"BICYCLING IN LONDON."

To the Editors of THE LANCET.

SIRS,—Your correspondent "M.D. Lond.," whose letter appeared in THE LANCET of April 27th, p. 1236, is illogical. When she drives in a hansom cab she encounters "horses that flounder and threaten to fall," but no sooner is she mounted on her wheel then behold "every horse is well under control." It is perfectly true, as stated in your annotation in THE LANCET of April 20th, p. 1154, that bicycling in London, when indulged in by women, is fraught with danger, although their machines are safer than men's, because so much easier to dismount from, while their upright seat allows them to survey their surroundings with facility. The agent responsible for the downfall of so many bicycling women is the too long petticoat or skirt. Until women can bring themselves to subordinate their clothing to utilitarian ends they will do well to refrain from bicycling in London. I am, Sirs, yours faithfully,

April 27th, 1901. A CYCLIST SINCE 1871.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The St. John Ambulance Association in India.—Still Further Increase of the Plague Epidemic.—Change of Stations for British Troops.

FOR many years the ambulance association in connexion with the Order of St. John has recognised the extensive field for its work which India presents, but the attempts at instruction in first-aid have been spasmodic and individual. It is proposed now to institute various centres in India and Major Yate of the central executive has been appointed organising secretary and is at present touring for the purpose. Influential committees have been appointed at Calcutta, Madras, and Bombay, and local enthusiasts have been secured to carry out the work. Some organisation of this kind was absolutely necessary, and amongst the European population the instruction ought to be very popular. Every British sojourner in India is liable to accident of some kind or another, and he is often so placed that professional skill is beyond his reach. It is therefore particularly necessary that his comrades should be able to render first-aid. I need only mention planters, sportsmen, volunteers, railway officials, and police to show the immense field for the work of this association. I do not anticipate much success with the natives of India, either with the educated classes or by a modified elementary course of instruction with minor officials. The object of the association and its teaching must be first assimilated by the British residents. The movement has been already taken up, and I understand that many classes have been started. Probably, in no other country could the benefit of a knowledge of rendering first-aid prove so useful as to the British residents in India, and the movement should meet with every success.

The record of plague for the past week shows a still further development. The total deaths number 11,606 compared with 11,480 during the previous week, and 4546 in the corresponding week of last year. There has been a further increase in the districts of Bengal—the country surrounding the cities of Patna and Gya contributing most to the 7881 deaths returned for Bengal. In the cities it has declined and there is a marked abatement in Calcutta. The disease continues to spread in the Punjab. Elsewhere there is little change. The official notification of areas affected includes the Bombay Presidency, the Karachi district (Sind), the Salem district of the Madras Presidency, the towns of Calcutta and Howrah and the Twenty-four Parganas, Patna, Gya, Shahabad, Saran, Muzaffarpur, Darbhanga, Monghyr, the Santhal Parganas, Hazareebagh, Palamau and Manbhum districts of Bengal, the Benares and Ballia districts of the North-west Provinces, Bangalore (the city and the civil and military stations), Mysore city, and the Kolar goldfields. In addition there are districts affected in Baroda territory and in Rajputana and in several districts in the Punjab. The plague has at last attacked Agra, presumably through an imported case, and thus the disease shows further signs of attacking slowly town after town up the course of the Ganges. Hitherto all this densely populated area has escaped. With the likelihood of recurrences year after year as in the cities first attacked there is little chance of the epidemic disappearing for a long time to come.

I am glad to say that the military authorities of the Government have at last recognised the dangers of Dum-Dum to the health of British troops. The garrison is to be reduced considerably all the year round. A larger number of men will in future be kept during the summer at Lebong (Darjeeling) and the force at Dinapur will be increased during the winter.

April 13th.

GERMAN SURGICAL CONGRESS.

(FROM OUR BERLIN CORRESPONDENT.)

THE Thirtieth Congress of the German Surgical Association was opened in Berlin on April 10th, Professor VON CZERNY (Heidelberg) being in the chair.

Renal Surgery in the Nineteenth Century.

Professor KÜSTER (Marburg) read the first paper. In it he gave a review of what had been done in renal surgery since the time of Sir T. Spencer Wells and Dr. Gustav Simon, who were the first to perform such operations. The mortality, which was at first 44·6 per cent., has now fallen to 16 per cent., this result having been obtained not only by an improved method of operating, but especially by the greater accuracy of diagnosis. Cystoscopy and catheterisation of the ureters now enabled surgeons to ascertain whether one kidney or both kidneys were affected. In cases of moveable kidney nephropexy gave the best results, being followed by only 6 per cent. of relapses. For wounds of the kidney suture and packing (tamponade) were to be preferred to total extirpation, as suggested by Dr. Simon. In suppuration of the kidney the course to be followed differed according to the cause of the suppuration. In tuberculous disease nephrectomy with extirpation of the ureter was the best operation; when there were renal calculi, and also in cystonephrosis, nephrectomy was preferable. For malignant growths total or partial nephrectomy was necessary. The lumbar incision was of course the only advisable one, but for large growths laparotomy must be sometimes performed.

The Progress of Diagnosis in Renal Surgery.

Dr. CASPER (Berlin) gave an account of his methods of ascertaining whether a kidney was healthy or not. By catheterisation of both ureters the urine of each kidney was collected separately and was then examined as to its freezing-point, the amount of nitrogen contained in it, and the amount of sugar which followed the administration of phloridzin. It has been found that the freezing-point of urine varied according to the condition of the kidney from which it came, for the healthier the kidney was the more nearly did the freezing-point of the urine approach that of water. A healthy kidney excreted a greater amount of nitrogen than an unsound one and the amount of sugar obtained by the administration of phloridzin was also smaller in disorders of the renal function. Dr. Casper mentioned 14 cases in which by his methods the existence of renal troubles was ascertained previously to operation, although other methods had given no trustworthy results.

Treatment of Enlarged Prostate.

Dr. GOLDMANN (Freiburg) proposed that in cases of enlarged prostate recourse should be had to cystopexy—i.e., suturing of the anterior wall of the bladder to the abdominal wall. In one case he found at the necropsy that the internal orifice of the urethra had become wider by the traction of the cicatrix.

Operations for Goitre.

Professor KOCHER (Berne) presented a report on the second series of 1000 operations performed by him for goitre. He said that he now employed excision almost exclusively, enucleation being resorted to in rare cases only. In ordinary goitre the mortality was only 4 per cent. Septicæmia never happened. One patient died from cachexia strumipriva and one under the anæsthetic. He now used neither chloroform nor ether but only local anæsthesia according to Schleich's method. In the last 302 cases no death occurred. He then drew attention to struma profunda, in which condition diagnosis was often difficult. The patients complained of dyspnœa or palpitation, so that the disease was sometimes believed to be cardiac trouble or bronchitis, especially when it was accompanied by cough. If moveable the tumour might appear above the sternum during a fit of coughing; if it were not moveable the diagnosis might be made by means of the x rays; paresis of the recurrent nerve also sometimes appeared. The operation for struma profunda was very difficult. All the arteries must first be ligatured; when there were adhesions between the tumour and the surrounding tissues "morcellement" was necessary. In his 1000 cases there were 22 of struma profunda. As to the internal treatment of goitre, he said that preparations of the thyroid gland of animals had not given such good results as were at first expected and, moreover, undesirable symptoms often appeared during their administration. Iodine was preferable. Phosphate of soda might also be administered, because it counteracted the hypersecretion of the gland and therefore caused considerable decrease of its size.

Professor KRASKE (Freiburg) said that he had performed 420 operations for goitre, of which one-third were in men and two-thirds in women. In 220 cases extirpation was performed. Ten of the growths were malignant, one was metastatic, and two were accessory. In four cases of enucleation there was severe hæmorrhage afterwards. He used no general anæsthetic, but Schleich's method exclusively. The number of cases of goitre increased considerably from year to year, notwithstanding the use of thyroid preparations—a class of remedies which never produced a permanent cure but only a temporary amelioration.

Professor KÖNIG (Berlin) asked how much of the gland must be left intact to avoid cachexia strumipriva.

Professor KOCHER replied that at least one-fourth must be left.

Disinfection of Infected Wounds.

Professor VON BRUNS (Tübingen) said that the disinfection of wounds by chemical agents was practically impossible; the substances used for this purpose would have to be applied in so concentrated a form that poisoning would be the consequence. Disinfection by physical means, such as drainage, large incisions, &c., gave better results, but was not always available. Professor von Bruns had found that pure carbolic acid was less toxic than concentrated solutions. He only put from two to six grammes (from 30 to 90 grains) of pure carbolic acid into a wound. The effect was a strong antiseptic action, and the discharge from the wound afterwards became so small that in a case of adenitis the dressing was able to be left undisturbed for three weeks. He had also found that brushing the wound with alcohol was the best way to avoid carbolic acid poisoning.

Professor KÜSTER said that pure carbolic acid was a caustic and that the actual cautery would act in the same way.

Professor KÖNIG recommended incision followed by draining and attributed the good results obtained by Professor von Bruns, not to the carbolic acid, but to the other parts of the treatment. He had used chloride of zinc for many years.

The Indications for General Narcosis and Local Anæsthesia

Professor VON MIKULICZ (Breslau) said that chloroform and ether were both of them dangerous to some extent. The surgeon must not use either ether or chloroform exclusively but must select one or other according to the nature of the case and the condition of the patient. Ether was by no means so free from danger as had been supposed. Local anæsthesia was becoming more and more used even in major operations, especially since Koller's discovery of cocaine and Schleich's anæsthesia by infiltration. Schleich's method had been used by Professor von Mikulicz in a great many cases. It had, however, the drawback that the infiltration caused the tissues to become so swollen that the operation was sometimes made very difficult by the impossibility of distinguishing the different layers of the part—as, for instance, in operations on the mamma. In laparotomy Schleich's method was very good for the incision of the abdominal walls, but in the subsequent stages it was often insufficient, and in those cases general anæsthesia had to be induced. For operations on the extremities and for minor operations in general this method was undoubtedly preferable to general anæsthesia. General practitioners now used Schleich's infiltration anæsthesia in the majority of cases. A collective investigation conducted by Professor von Mikulicz amongst the practitioners of Silesia showed that general anæsthesia had been used in 38,000 cases and Schleich's anæsthesia in 103,000 cases. In the choice of a general anæsthetic the surgeon must be guided by the condition of the patient. Chloroform was liable to interfere with the action of the heart, and ether should therefore be employed for patients suffering from cardiac trouble; when bronchitis or other diseases of the lungs existed chloroform was preferable to ether. When pneumonia followed an operation it must not always be attributed to the anæsthetic, for in some conditions, such as strangulated hernia, there was a marked tendency to pneumonia independently of the anæsthetic. It had even been stated that pneumonia occurred in these cases when no anæsthetic had been administered. Pneumonia often occurred because the patient had caught cold during the operation, and it was recognised that pneumonia after operation had considerably decreased since operating-tables were provided with heating apparatus. Professor von Mikulicz generally preferred ether, an excessive dose of which was not so easily given as in the case of chloroform.

Professor BIER (Greifswald) then gave an account of his injections of cocaine into the lumbar arachnoid, which were noticed in THE LANCET of March 16th, 1901, p. 825. Although himself the author of this method he was more sceptical than other surgeons as to its advisability. There was no doubt that a total analgesia of the lower extremity could be obtained, but undesirable symptoms were very frequent. Headache, vomiting, giddiness, shivering, &c., were met with after the injections. The cause of these complications was that the cocaine made its way through the spinal arachnoid into the brain. He had made experiments in the hope of finding means of preventing the cocaine reaching the brain, but was not yet able to give details. When weak solutions were used the anæsthesia was less complete, but complications nevertheless followed. Tropacocaine was reported to be less dangerous than cocaine, but Professor Bier was of opinion that his method was not as yet adapted for use in general practice.

(To be continued.)

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Arsenic in Beer.

DR. NATHAN RAW, the medical superintendent of the Mill-road Infirmary, gave some interesting evidence before the Royal Commission presided over by Lord Kelvin which is inquiring into the evil effects of the presence of arsenic in beer. Dr. Raw stated that the recent epidemic of arsenical poisoning in Liverpool did not appear to be as extensive as that in Manchester, although some of the cases had been of a severe type. During the last three years there had been 226 cases of peripheral neuritis in the Mill-road Infirmary, of which number 153 had presented symptoms which might be attributed to the presence of arsenic. Of these 226 patients 51 had died, the apparent cause of death being general asthenia with cardiac failure in most cases. During the years 1898 and 1899 the number of cases of neuritis averaged 30 a year, but a sudden increase was first noted, in June, 1900, which steadily progressed until the end of 1900. Reviewing the epidemic as a whole he had noted the cases to be divided into two classes—

acute and chronic. Of the former he had only seen 17 cases. They occurred late in the epidemic, about the beginning of December. The patients had the appearance of having been suddenly and acutely poisoned with a large dose of arsenic. The symptoms, although acute for a few days, passed off, and in all cases the patients were discharged as recovered. The chronic cases comprised by far the greater number, and on admission they presented the usual symptoms of peripheral neuritis and had the appearance of some slow and chronic form of poisoning, attributed at that time to alcohol. Dr. Reynolds's paper was the means of his attention being drawn to the presence of arsenic, which of course explained the cause of the epidemic. He had noticed that since the epidemic of arsenical poisoning in Liverpool the amount of alcoholism had decreased.

Mr. Benn Wolfe Levy and the Freedom of the City.

The City Council are about to confer the freedom of the city upon Mr. Benn Wolfe Levy in recognition of the benevolent spirit which animated him in the matter of the David Lewis trust. It will be remembered that the late Mr. David Lewis left his large fortune to his two nephews, of whom Mr. Levy was one. He also left a sealed letter expressing the hope that his legatees might devote the money for the benefit of the people of Liverpool and Manchester. Mr. Levy and his co-trustee at once gave effect to this direction, although they were not legally bound to do so. The outcome of this generosity, as far as Liverpool is concerned, was the erection of the New Northern Hospital (now known as the David Lewis Northern Hospital). Funds were also provided from the same trust for the building of new homes for nurses in connexion with the Victoria Jubilee Memorial. The trustees of the fund also acquired a site for the purpose of a recreation ground for the people in the east end of the city, and they are also erecting a handsome pile of buildings on the site of the old St. James's Market for the purpose of homes for single men, besides a library and other institutions for the people of the south end of Liverpool. A large sum of money has been devoted to these undertakings, and Mr. Levy, as the head of the trust, has travelled long distances to inspect the best-equipped hospitals, in order that Liverpool may possess in its new Northern Hospital one of the finest buildings of its kind. Mr. Levy has also devoted a good deal of time in superintending the erection of the new hospital, and it is generally acknowledged that the David Lewis Northern Hospital is a building thoroughly up to date in every particular.

The late Arthur Samuels, M.D. St. And., &c.

Dr. Arthur Samuels succumbed to an attack of pneumonia of short duration on April 21st, at the age of 70 years. He received his medical education in Dublin and obtained the Membership of the Royal College of Surgeons of England in 1858. He graduated as M.D. of St. Andrews University in 1862. He was an honorary physician of the Liverpool Hospital for Consumption for a number of years, and he also served the ratepayers of Everton for over 20 years as a member of the burial board. Dr. Samuels was a man of exceedingly amiable disposition and it can be truthfully said of him that he had troops of friends and was never known to have made an enemy.

A University for Liverpool.

At a special meeting of the Council of University College, under the presidency of the Earl of Derby, K.G., held on April 17th, the question of converting University College into Liverpool University was discussed, and the following motions were unanimously adopted:—

1. That, while gratefully acknowledging the advantages which have accrued to University College, Liverpool, by its association with Victoria University, this Council is of opinion that a university should be established in the city of Liverpool; that this Council will welcome a scheme with this object upon an adequate basis, and that a committee be appointed to consider and report upon the whole question, with power to make inquiries and to communicate with other bodies.

2. That the committee consist of all the members of Council, with power to associate with them any other persons whom they may think fit.

April 30th.

SUBSTANTIAL HELP TO THE METROPOLITAN HOSPITAL.—The chairman of the Metropolitan Hospital, Kingsland-road, announced at the annual meeting of the governors and subscribers, held on April 29th, that the trustees of the late Mr. Zunz had awarded to the institution £1000 annually for 10 years.

WALES AND WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

Plague Precautions in Ports.

THE West of England and South Wales Branch of the Incorporated Society of Medical Officers of Health has among its members so many port medical officers that it is not at all surprising to find the question of the introduction of plague brought forward at the meeting on April 18th at Plymouth, although it had been discussed at Bristol as recently as February last. The medical officer of health of Plymouth (Mr. F. M. Williams) urged the need for new regulations by the Local Government Board in lieu of the Order of 1896, in view of the opinion, now pretty generally held, that rats are the prime factors in the spread of the disease. It appears that the dock authorities in Plymouth do not insist upon the gangways of vessels being raised at night, nor are the cable ropes protected with iron collars as at Bristol, Liverpool, and elsewhere, in order to prevent rats from coming ashore. Mr. Williams considered, also, that regulations should be framed with regard to the examination of baggage, though he did not state precisely how this should be carried out, and other speakers, notably Mr. J. C. Heaven of Bristol, were of opinion that the proceeding would not be at all practicable. Having regard to the return of the troops from South Africa and to the possibility of plague being brought into this country from the Cape, it is very satisfactory to learn that the military authorities have given the port sanitary authority of Plymouth a free hand in dealing with infected soldiers and have placed at the disposal of the authority Drake's Island, one of the forts, and if necessary Staddon Heights, and have agreed to pay all costs that may be incurred by the authority.

A Low Death-rate.

The death-rate of Porthcawl in 1900 was only 6·2 per 1000. This Welsh seaside resort has a resident population of about 2000.

Housing of the Working Classes in Swansea.

The Swansea Corporation are about to erect cottages for working men. They are to cost £194 each and will be let at a rental of 6*s.* weekly. Each house will contain a parlour, kitchen, and scullery, three bedrooms and a bathroom. This last is a distinct innovation in Swansea cottages and it will be interesting to see whether it will be appreciated, for it is remarkable how little value, as a rule, is attached to a bathroom by the working classes. Even in the coal-mining districts, where the colliers have their daily baths on returning from work, they seem to prefer the wooden tub made out of half of a 40-gallon cask before the kitchen fire rather than to retire to a separate bathroom. In one Glamorganshire village where the houses are nearly all owned by the proprietors of the colliery bath rooms were erected leading out of the kitchens, but the long iron baths are never put to their legitimate use and as often as not are found filled with coal or used as a general receptacle for odds and ends.

Royal Albert Hospital, Devonport.

A successful bazaar and café chantant in aid of the funds of this hospital was opened by Lady Charles Scott on April 23rd. The annual income of the Royal Albert Hospital averages £4000 and the expenditure amounted to £4500. Recently improvements have been made in the building at a cost of £2000. Towards this sum Sir John Jackson promised £500 provided £1500 were raised by a certain date, and at present only £182 are needed to obtain the promised sum. The whole of the proceeds of this bazaar will be devoted towards the expenditure of the hospital and not towards the building fund for the recent improvements.

Crownhill Convalescent Home.

The annual meeting of the subscribers of the Crownhill Convalescent Home near Plymouth was held on April 19th under the presidency of Sir Massey Lopes. The medical report stated that 246 patients had been admitted during the year 1900. The financial statement showed that the income amounted to £478 and that a favourable balance of £7 remained. Sir Massey Lopes in appealing for increased subscriptions alluded to the munificence of the founder of the home, Dr. C. A. Hingston

April 29th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow University.

THE graduation ceremony closing the winter session of the university took place on April 23rd. Among those who received the honorary degree of LL.D. were Andrew Cecil Bradley, M.A., formerly professor of English literature in the University; Charles Scott Dickson, K.C., M.P., Solicitor-General for Scotland; and Arthur William Rücker, D.Sc., F.R.S., secretary of the Royal Society. The degree of M.D. was conferred on Alfred George Newell, M.B., C.M., Ursula Chaplin, M.B., C.M., and George Mervyn Sydenham, M.B., C.M. Mr. Newell was "commended" for his thesis on "Insanitary Areas and Houses in Bombay and their Relation to Plague, with a Suggested Scheme of Improvement." The following medical graduates received the degree of D.Sc.: Walter King Hunter, M.D., B.Sc., Adam Brown Kelly, M.B., B.Sc., Robert Stevenson Thomson, M.D., B.Sc., and James Sim Wallace, M.D., B.Sc. Among the University prizes the Dobbie-Smith gold medal for the best essay on a subject within the limits of the science of botany with an illustrative series of microscopic and macroscopic specimens was awarded to Daisy Annabella Murdoch Clark, M.B., B.Sc., the junior-Arnott prize in physiology was divided between William B. Morton Martin and John Logan Stewart, M.A., and the senior Arnott prize was gained by Joseph White, M.A., B.Sc. The most distinguished M.A. for the year (1900) was adjudged to be Mabel Atkinson; this lady accordingly received the Thomas Logan Memorial medal. The various class prizes and medals were also announced, Miss Gertrude Bostock, B.Sc., winning at Queen Margaret College medals in medicine, in surgery, and in pathology. The ceremony was closed by an address from the very Rev. Principal Story, LL.D. The Principal first made acknowledgment of the benefactions received by the University during the academic year. These included the sum of £11,000 presented by the late Mr. T. B. Thomson for the reconstruction of the anatomical school, a sum of £1200 for the foundation of a scholarship in pathology in memory of the late Professor Joseph Coats, and various other donations towards objects connected with the arts and science faculties. The Principal also intimated that the appeal for funds to increase and improve the medical and scientific laboratories will shortly be placed formally before the public, and he announced that the subscription list towards this object already reached £34,000, this sum including two donations of £5000 each. In connexion with the celebration of the ninth jubilee, which is to take place on June 12th, 13th, and 14th, he stated that representatives were expected from the English, Irish, Colonial, European, and American universities. The remainder of the address was occupied with a discussion of the true nature of education and of the relationship of the University to commercial and technical education. One feature of the jubilee celebrations is to be the issue of a memorial album to which many distinguished graduates have undertaken to contribute. Reminiscences of the old days when the college was situated in the High-street are to be supplied by Lord Lister. Sir Henry Campbell-Bannerman, Professor James Bryce, Sir Henry Craik, Sir William T. Gairdner, and Principal Rainy. The Rev. Henry Grey Graham has promised to write a historical sketch of the University and an article on the development of the medical faculty will be contributed by Sir Hector Clare Cameron. Other contributors include the Master of Balliol, Sir Lewis Morris, Mr. W. E. Henley, and Mr. Neil Munro. The album is to contain illustrations by Mr. J. Guthrie, R.S.A., Mr. D. Y. Cameron, and Mr. Muirhead Bone, and the representatives of "Young Glasgow," both in art and literature, will add to the interest of its pages. The corresponding secretary is Mr. Archibald Leitch, University Union, Glasgow. At the April meeting of the University Court Dr. J. Hutchison was appointed a representative on the board of the Victoria Infirmary in place of the late Dr. James Dunlop. It was agreed to grant the use of the chemical department for the annual meeting of the Society of Chemical Industry. A resolution received from the Students' Representative Council recommending that the degree of Ch.M. be altered to Ch.D., thus granting a doctorate in surgery, was remitted to the Senate for consideration.

Handsome Bequests to Hospitals.

The trustees of the late Mr. William Houldsworth have under the terms of his will intimated the following bequests: Glasgow Royal Infirmary, £3500; Glasgow Western Infirmary, £3500; Ayr County Hospital, £1000; Royal Hospital for Sick Children, the Association for the Relief of Incurables, and the Sick Poor and Private Nursing Association, Glasgow, each £250. A number of smaller sums are also granted to several special hospitals and associations. Under the same will the University of Glasgow receives £2000 and the West of Scotland Technical College £1500.

Small-pox in Glasgow.

The decline of the epidemic continues. The new cases registered during the past fortnight numbered 67, as against 92 in the previous fortnight, and the total actually under treatment has fallen to 130. No new cases during the fortnight occurred in either the north-western or south suburban districts of the city. According to recent statements of the convener of the Health Committee 302,000 of the citizens have been revaccinated since the beginning of the year.

Pharmacy Prosecutions in Glasgow.

The Pharmaceutical Society continues to give attention to the sale of poisons in open surgeries. During the past week two cases have occurred in which assistants in such surgeries, unqualified under the Pharmacy Act, have been convicted of the sale of scheduled poisons. In one of the cases the poison—red precipitate in the form of an ointment—was not even labeled as required by law, and the sheriff, regarding this as an aggravation of the offence, inflicted a fine of £4 and costs. In the second case two scheduled poisons—viz., carbolic acid and tincture of opium—were sold, and the accused was fined £6 and expenses. The legal representative for the defendant stated that his client had been prevented from passing the final examination by extra work due to the outbreak of small-pox. There seems to be no limit to the apologetic burden to be placed to the debit of this unfortunate epidemic.

April 30th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Royal Victoria Hospital, Belfast.

MR. WILLIAM CRAWFORD, who has recently been appointed chairman of the Board of Management of the Royal Victoria Hospital, Belfast, has decided to present the hospital with a new and up-to-date ambulance which will be of the greatest benefit to the patients.

Royal University Graduates' Association.

At a very largely-attended meeting of the council of the Royal University Graduates' Association held in Belfast on April 26th, Dr. W. A. McKeown (President of the association) being in the chair, the following resolutions were unanimously adopted:—

1. That we heartily welcome the assurance given by His Excellency Lord Cadogan that the Royal Commission of inquiry into the affairs of the Royal University will be composed of men of the strictest impartiality and of acknowledged eminence in educational matters.

2. That we observe with satisfaction the important declaration made by Lord Londonderry on behalf of the authorities of Queen's College, Belfast, of their desire "that the college may be maintained as a college, and a college only, free from all sectarian or denominational influence," an announcement from which we are bound to infer that the college authorities no longer support the scheme for resettling Irish university education put forward by Mr. Arthur J. Balfour, the main purpose of which was to establish a university in Dublin for Roman Catholics and the conversion of Queen's College, Belfast, into a provincial university for the "great Presbyterian bodies of the north."

3. That whilst we heartily approve of the scheme for the more efficient equipment of Queen's College, Belfast, we are of opinion that steps should be taken to widen its constitution by admitting to a share in its government representatives of the graduates and of private donors as well as nominees of elective public bodies, county and municipal.

4. That in view of the inquiry by the Royal Commission into Irish university affairs, and having regard to the fact that it is of the utmost importance that the various lay faculties of arts, medicines, law, and engineering should maintain their present position of freedom from clerical control, it is hereby resolved that committees of this association be appointed with instructions to collect and tabulate evidence relating to the respective faculties for presentation to the Commission and to report at an early date to the council.

The Admission of Patients to Asylums.

An interesting point bearing on the method of admission of patients into asylums came up at an inquest in Belfast, on April 26th. Briefly, the facts were as follows. A woman, the wife of a labourer, showed signs of nervous disease and a medical man told her husband to get a line

for her admission to the asylum. He procured a "blue" form and took it to another medical man who had also attended his wife, but he refused to certify her as insane. He then consulted the first medical man who advised him to go to the relieving officer for a line for the union infirmary. The woman was taken to that place, but at her own request the husband took her home, and on April 20th she became so bad that he brought a third medical man, who recommended him to get a magistrate's order for her admission to the asylum, but he found the court was over when he got there. On April 22nd the husband made an information and procured a warrant, and that evening a police-sergeant removed her to the police-office in the covered police-van. In the police office she became weak, a medical man had to be sent for to see her, and on recovering she went with her husband and the police-sergeant to the workhouse, where she died two days afterwards from exhaustion following upon mania. The coroner said that it was a barbarous system which was in practice at present of taking insane women down to the police-office and bringing them to the petty sessions court to be examined there. A simple and effective plan would be to have the "blue" form filled up by the dispensary medical officer and two magistrates brought to the house without any fuss or any trouble or any worrying of the insane person, and then the patient could be removed to the asylum where expert treatment could be put in force at once. He hoped in future that the plan he had mentioned would be adopted. The jury returned a verdict in accordance with the medical evidence and added a rider to the effect that they considered the procedure for the admission of lunatics to the district asylum as shown in the case was cumbersome and barbarous and that the simple plan of getting the dispensary medical officer of the district in which the lunatic resided to certify insanity in the presence of two local justices at the house of the lunatic, and that the lunatic should be sent direct from there to the district lunatic asylum, was the more humane plan.

Queen's College, Belfast.

Dr. P. Redfern has contributed £500 to the new endowment fund of Queen's College, Belfast.

The late Dr. C. K. D. Tanner and the Medical Profession in Cork.

Dr. Tanner had been intimately associated with the members of the medical profession in Cork for many years. He had studied arts and medicine in the Cork Queen's College and graduated in both at the late Queen's University. His father had been professor of surgery at the Cork College for a number of years and enjoyed a large and remunerative practice in the South of Ireland. Dr. Charles Tanner succeeded his father as surgeon to the Cork South Infirmary and a brilliant professional career seemed to be in store for him. However, he preferred the excitement of parliamentary life and finally ceased to practise his profession. Though, as is well known, he was a very pronounced politician, yet he managed to preserve the friendship of many whose political opinions were entirely at variance with his. Many of his professional associates in Cork knew that his health had been gradually breaking down for a number of years and they saw with regret that the end could not be long deferred. It is well known in Cork that in private life Dr. Tanner was a most courteous, genial, kind-hearted friend, and a vote of condolence passed to his relatives at the last meeting of the Cork Medical and Surgical Society fittingly expressed the kindly feelings which at all times subsisted between him and the other members of the profession in Cork.

April 30th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Death of Dr. Napias.

DR. NAPIAS, director of the Assistance Publique, died on April 29th, at the age of 59 years, owing to disease of the liver from which he had for some time past been a sufferer. Born in 1842, at Sezanne (Marne) he entered the medical department of the navy in 1863, and retiring in 1877 he returned to Paris where he took his doctor's degree, after which he gave his whole attention to hygiene. In 1877 he founded, together with Budin, Gubier, Dubois, Laborde, and Pinard, the Society of Public Medicine and Professional Hygiene, of which society he was the secretary-general. He was appointed departmental inspector of factory children and became president of the Council of Inspectors-General of Charitable Institutions, a member of the Consultative Committee of Public Hygiene of France, a member of the Superior Council of the Assistance Publique, and finally on May 12th, 1898, director of the Assistance Publique. Dr. Napias was a man of the very greatest merit and was loved and esteemed by all who knew him. He was absolutely devoted to the work which he carried on for the last three years and which he was most anxious to protect from the attacks made upon it, attacks which were often unjustifiable, by granting universally demanded reforms. As a scientific writer he stood high and among his works I may mention: A Manual of Industrial Hygiene—a Study of the Progress of Hygiene in France from 1878 to 1882 (with A. J. Martin); Isolation Hospitals of Europe; Poor-law Relief in the Department of Sambre et-Loire; and Hospital Hygiene and Poor-law Relief (with A. J. Martin). He had been a member of the Academy of Medicine since 1897 and was also *officier* of the Legion of Honour.

An Improved Method of Applying the Treatment of Finsen.

The treatment of lupus by photo-therapeusis, after the method of Finsen, has been adopted in Paris as in other scientific centres of Europe. There is one set of apparatus in working order at the St. Louis Hospital, the great French school of dermatology, and another is at work in a private dermatological institute. There are, however, two grave obstacles in the way of applying this treatment in a wide-spread manner, one being the length of time necessary and the other the expense. Each sitting lasts one hour and requires the attendance of a specially trained nurse for each patient. A great step in advance has, however, been taken by means of the apparatus devised by M. Lorted and M. Genoud of Lyons. M. Gastou has just given a set to the French Society of Dermatology and Syphilography. The apparatus is based on the same lines as that of Finsen but is much more powerful, and the condensers necessary in Finsen's apparatus have been done away with by intercepting the luminous rays as near their point of origin as possible. As in Finsen's apparatus there is a special arrangement for cooling the rays. The results are superior to any hitherto attained. It is possible to affect an area almost double that formerly operated upon and the photo-chemical intensity of the rays is so great that the time of exposure necessary is reduced from one hour to 15 minutes. Besides the economy in attendants which this brings about it must be noted that Finsen's apparatus required a current of from 60 to 80 ampères, which is not to be met with everywhere, while the new apparatus only requires a current of 10 or 12 ampères, which the ordinary electric-light mains can easily supply. These important improvements will allow the light treatment to be much more generally used than heretofore. Its results are without doubt remarkable, but up to now the expense attendant on the treatment has precluded its general application.

The Employment of White Lead.

A vigorous campaign is being carried on against the use of *blanc de céruse* (carbonate of lead) in painting. This is in accordance with a resolution passed by the Superior Council of Hygiene of France which ranked white lead among the deadly poisons. It is well known that this pigment is the common cause of the lead-poisoning so widespread among painters. The Director of Posts and Telegraphs has forbidden its use in all the offices under his control, and in addition the painters of Grenoble have gone on strike to demand that all employers should use zinc white instead of lead white. Zinc white is far less poisonous but more expensive, as owing to its want of "body" more coats have to be laid on. The painters have sent out a circular to all medical men in France asking for their support. They also ask for the subscriptions of medical men to be paid into the strike fund in the name of those principles of hygiene and sanitation upon which medical men are always insisting.

May 1st.

QUEEN VICTORIA JUBILEE CONVALESCENT HOME, CLIFTON.—At a town's meeting held at Bristol on April 26th under the presidency of the Lord Mayor it was resolved to appeal for donations to the Queen Victoria National Memorial and to a local fund towards completing the endowment of the Queen Victoria Jubilee Convalescent Home, Clifton.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Sydney Hospital.

THE annual meeting of the governors of this hospital was held on Feb. 26th, His Excellency the Lieutenant-Governor presiding. The annual report for the year 1900 showed that 3701 patients had been admitted. Of these 404 died, 2084 were discharged, and 984 were relieved. The average number of beds occupied was 296, the largest number being 314 and the smallest 280; the average duration of stay in days was 27. The number of accidents and urgent cases admitted without recommendations was 1664; the number of cases admitted on Government orders was 1349; and the number of admissions on subscribers' orders was 115. The number of patients who contributed to their maintenance was 573. During the year 2269 operations were performed. The new cases treated in the out-patient department during the year numbered no fewer than 25,829, and the attendances numbered 91,002. The President stated that during the past year the operations of the institution had been eminently satisfactory and the board had been able to carry forward a credit balance. It had also been able to introduce several scientific departments. It was the intention to utilise the institution during the coming year for the benefit of the public more than had ever been done. The Government had been good enough to advance £6000 to provide for certain much needed improvements and the board intended to enlarge the operating theatre and to bring it up to modern requirements. It was also intended to afford greater facilities for treating casualty cases. The board, in conjunction with the University of Sydney, was making the necessary arrangements to give better education in connexion with the School of Dentistry which it was expected would be established before long at the Sydney Hospital. At the ordinary monthly meeting of the board of directors a request was granted from the honorary medical staff for permission to erect a tablet at the hospital in memory of the late Dr. Neill. Dr. C. V. Bowker was appointed medical superintendent, Dr. H. S. Stacy resident pathologist, and Dr. A. G. Corbin, senior resident medical officer.

Prince Alfred Hospital, Sydney.

The annual meeting of the governors of the Prince Alfred Hospital, Sydney, was held on March 6th. His Excellency the Lieutenant-Governor presided. The report for 1900 stated that the number of patients under treatment during the year and the general results were as follows. Remaining in hospital Dec. 31st, 1899, 219; admitted during the year 1900, 3287—total under treatment, 3506. Of these 1807 were cured, 782 were relieved, 313 were unrelieved, 381 died, and 223 remained in hospital on Dec. 31st, 1900. The number of beds in the hospital was 236; average number resident daily, 227; mean residence of patients in days, 27; rate of mortality per cent. (deducting the 58 deaths of patients which occurred within 24 hours of admission), 9·21; rate of mortality per cent. over total cases under treatment, 10·7; rate of mortality per cent. on admissions, 11·59. Number of attendances in out-patient and casualty departments, 43,769; number of individual patients in these departments, approximately, 11,000. Of the patients admitted during the year 1148 were cases of accident or urgency, 1420 were received under Government vouchers, 712 contributed more or less towards their support in the hospital, and 32 were treated in the Ogilvie and Fairfax wards (included in contributing cases). The total amount received from contributing patients during the year was £2201 14*s.* 3*d.* The mean residence in the hospital of each patient during the year had been 27 days. Of the total deaths occurring in the hospital 58 took place within 24 hours of admission. The average cost per bed for the year had amounted to £66 7*s.* 6*d.*, as against £69 16*s.* 9*d.* in 1899. This result had been calculated, as in past years, after deducting the cost of the out-patient department, and of buildings and permanent improvements, from the total expenditure. The income for the year was £17,602 3*s.* 3*d.* £506 2*s.* of this amount were transferred from the endowment fund to cover the cost of building the ambulance-driver's cottage. The Government contributed £10,092 3*s.* 9*d.*, £3800 12*s.* 5*d.* on the £ for £ principle, and the remainder for the maintenance of Government patients. Professor Anderson Stuart, president of the hospital, said that the operative department of the hospital had been an increasing one. In 1883, when the hospital was opened, there were only 147 operations. Last year there were no less than 1733. This showed the growth in the amount of work done in the hospital. The accommodation was altogether too limited. They had 236 registered beds in the hospital. The average number of persons in the hospital had been about 227, leaving only nine beds for the whole hospital, as on the average, available at any given time. But that did not really represent the actual state of affairs. Taking this year as far as it has gone, there had only been nine days when they had a number of patients in the hospital equal to, or under, the number of beds in the hospital. On every day of this year, excepting those nine days, there had been more patients than beds. They put patients in shakedowns and on the floor, and then they were simply obliged to say, "We are sorry, but we cannot take a case in." They had been obliged to do that in cases that ought to have been taken in. Absolutely the accommodation of the hospital and the resources of the hospital were fully occupied, and they simply could do no more. That meant that evidently the time had come when the resources of the hospital would have to be increased. The following appointments have been made at the hospital: medical superintendent, Dr. C. B. Blackburn; resident pathologist, Dr. J. B. Cleland; resident anæsthetist and registrar, Dr. W. E. Harris; resident medical officers, Mr. E. V. Barling, Dr. J. a'B. D. Barton, Dr. R. D. Heggeton, Dr. Sydney Jones, Dr. A. H. Macintosh, and Dr. S. M. Verco; gynæcological clinical assistants in the out-patient department, Dr. A. Watson Munro and Dr. H. C. Taylor Young.

March 19th.

Obituary.

JOHN ARCHIBALD LORIMER, M.R.C.S. ENG., L.R.C.P. LOND.

THE death occurred on April 27th, at Farnham, of Mr. J. A. Lorimer. On April 26th Mr. Lorimer whilst on his professional round was being driven in a governess car by his coachman when the pony got beyond control and bolted, and the vehicle was overturned. The coachman escaped unhurt but Mr. Lorimer received serious injuries. He was removed by members of the local ambulance association to his home in Castle-street, where he was seen by Dr. C. E. Tanner and Dr. J. Hussey, who found that there was but slight hope of his recovery, the base of the skull being fractured; he had also a badly fractured arm. He remained unconscious until Saturday afternoon, when he died. Mr. Lorimer was 54 years old and he enjoyed an extensive practice in Farnham and neighbourhood for upwards of 30 years. At the time of his death he was medical officer to the rural sanitary authority of Farnham, medical officer to the Farnham Joint Isolation Hospital, medical officer of the Farnham and Hartley Wintney School District, and medical officer of the north district of the parish of Farnham. Mr. Lorimer had always taken an active part in public affairs and was a member of the Farnham School Board. Formerly a Liberal in politics, he joined the Unionist party at the time of the Home Rule split. He has since been a warm supporter of the Right Honourable St. John Brodrick, M.P., and as local chairman of his committee at the election last year contributed largely to the return of the Secretary of State for War. He was exceedingly popular and his death is universally mourned in West Surrey.

MEDICAL MISSIONARY ASSOCIATION.—The annual meeting of the friends of the Medical Missionary Association was held at Exeter Hall on April 26th, Dr. George Saunders, C.B., presiding. The report for the past year stated that during the past winter nine men had been in residence in the training house at Highbury-park. Dr. J. L. Maxwell said that the association encouraged its students to take the highest possible training, and this was not found prejudicial to the missionary spirit and activity. The year's receipts have been £1761 and the expenditure £1857.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At the congregation on April 25th the following degrees were conferred:—

Doctor of Medicine.—C. Woodhouse, King's College; W. Langdon Brown, St. John's College; and A. E. Porter, Emmanuel College.

Bachelor of Medicine and Bachelor of Surgery.—C. C. Simpson, Trinity College; and H. A. Upward, Christ's College.

The following have passed the examination in Public Health for the University diploma:—

S. H. Ali, J. B. Anderson, J. Andrew, J. M. Flavelle, J. G. Forbes, J. C. Harcourt, T. H. Jones, R. H. Makgill, H. de R. Morgan, R. Niven, A. C. Pearson, H. Pest. H. M. Pereira, W. H. Read, S. T. Reid, H. A. Schölberg, S. W. Thompstone, W. B. Thomson, F. C. Tothill, J. C. White, and E. H. Williams.

Mr. Edmund Owen has been appointed an additional examiner in surgery.—There are over 90 candidates for the Easter term examination in surgery and midwifery.—Tenders for the erection of the Medical School and Humphry Museum have been received. They amount to about £26,000 and their acceptance by the University is recommended by the building syndicate.—A studentship for research in botany will be vacant at Michaelmas in Caius College. Candidates must be Bachelors of Arts who have taken honours in the Natural Sciences Tripos, Part I. Names are to be sent to the Master of the College by Oct. 1st.

UNIVERSITY OF DURHAM.—At the third examination for the degree of Bachelor in Medicine, held in April, the following candidates satisfied the examiners:—

New Regulations.—Anthony Bourchier Bradford, St. Thomas's Hospital; John Cooper, B.Sc., F.C.S., John Wilfrid Caton, John Frederic Dover, and Guy Rowland East, College of Medicine, Newcastle-upon-Tyne; George Ernest Froggatt, Middlesex Hospital; Charles Wm. Menelaus Hope, College of Medicine, Newcastle-upon-Tyne; Wharram Henry Lamplough, Birmingham University; Charles Robert Lease, College of Medicine, Newcastle-upon-Tyne; Lucy Selina Molony, London School of Medicine for Women; Francis O'Neill, College of Medicine, Newcastle-upon-Tyne; Thomas Eben Pemberton, Birmingham University; Alfred Henry Proctor, College of Medicine, Newcastle-upon-Tyne; Percy Montgomery Rivaz, St. Bartholomew's Hospital; Thomas Rowell, William Greenwell Robson, Frederick William Ritson, and Basil Edward Spurgin, College of Medicine, Newcastle-upon-Tyne; Charles Ravenscroft Stewart, St. George's Hospital; and Godfrey de Bec Turtle, King's College Hospital.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the spring sittings of the Triple Qualification Board of the Royal Colleges of Physicians and Surgeons of Glasgow held in Glasgow the following candidates passed the examinations as indicated:—

First Examination (five years' course).—Alexander Robb M'Intyre Macilraith, William Macilraith, John Watt, and Thomas Ormiston Wilson, Anderson's College Medical School; Hugh Graham Anderson, Kenneth James Logan Bannerman, William Watkin Neilson Knox, Ernest Adolphus Neal, and Joseph Lloyd Owen, St. Mungo's College; Stewart Ashwood Friar, Queen's College, Belfast; John Austin Joseph Crowley, Queen's College, Cork; James Augustus Robertson and William Frederick Clarke Walker, Royal Colleges, Edinburgh; and William Frederick Fismer Durr, University of Edinburgh.

First Examination (four years' course).—Morgan Evans Jones, Edinburgh School.

Second Examination (five years' course).—Katharine Mary Chapman, Queen Margaret College; John Priestley Newton and James Robert Robertson, St. Mungo's College; John Hutchison Fyfe and Edward Graham Taylor, Anderson's College; David Abern, Queen's College, Cork; Emily Jane Polito, London School of Medicine for Women; Edward Percy Airth Richardson, School of Physic, Dublin; and James Cullen, Edinburgh University.

Second Examination (four years' course).—A. W. Macdonald, Glasgow University; and Lewis Edward Jarrett, Anderson's and Owens Colleges.

Third Examination.—Henry Rayner Helsby (with distinction), William George Macdonald, Thomas Joseph M'Kagney, Richard Lewis, Stanley Lister George D. Maclaine and Peter Carruthers Watt, St. Mungo's College; David Moodie, Anderson's College; Hermann S. Christoffelsz and Hamilton Watson, Royal Colleges, Edinburgh; Gordon Stonehouse and William Dalziel Sutherland, Durham University College; Herbert Macmaster, Queen's College, Belfast; and Marion Ethel Unwin, London School of Medicine for Women.

Final Examination (and admitted Licentiates of the three cooperating authorities).—Stewart Jackson Farries, St. Mungo's College; George Russell Jarvis, Anderson's and St. Mungo's Colleges; John Blair Conner, Anderson's College; Angus MacLeod, Anderson's College and Edinburgh University; Shusil Kumar Roy, Glasgow University and Anderson's College; William Parsons Lappin, Dublin and Edinburgh Schools; James Herbert Spray, Yorkshire College, Leeds; Robert John Morgan, Queen's College, Belfast; Gordon Stonehouse and Joseph Edwin Cooper, Durham University Medical College; John Stewart, University of Glasgow; and John Joseph Minihan, Queen's College, Cork.

ROYAL UNIVERSITY OF IRELAND.—The examiners have recommended that the following candidates be adjudged to have passed the under-mentioned examinations respectively:—

M.B., B.Ch., B.A.O. Degrees Examination.—Upper pass: Joseph G. Anderson, Queen's Colleges, Galway and Belfast; *Michael Curran, M.A., Roman Catholic University School of Medicine; *John P. Harold, Cork; *William M. P. Keogh, Roman Catholic University School of Medicine; Patrick Kerley, Roman Catholic University School of Medicine; John C. M'Carroll, Queen's College, Belfast, and Middlesex Hospital, London; *David M'Mordie, B.A., Queen's College, Belfast; *John O'Leary, Queen's College, Cork; and *John A. D. Radcliffe, Queen's College, Belfast.—*Pass:* Marion B. Andrews and William Barkley, Queen's College, Belfast; William C. Gavin, James Gorman, and Timothy J. Hartigan, Roman Catholic University School of Medicine; Robert Kennedy and Thomas Kennedy, Queen's College, Belfast; Michael J. M'Donough, Roman Catholic University School of Medicine; John M'Murray, Queen's College, Belfast; Peter G. Moran, Roman Catholic University School of Medicine; Chesnut Peacock, Queen's College, Belfast; Andrew J. Quirk, Roman Catholic University School of Medicine; Ernest F. Scott, Queen's College, Galway, and Edinburgh School of Medicine; and Hugh B. Smith, Queen's College, Belfast, and Middlesex Hospital, London.

The candidates marked thus * may present themselves for the further examination for honours.

M.D. Degree Examination.—Patrick T. O'Sullivan, M.B., B.Ch., B.A.O., Queen's College, Cork, and private study; and Richard S. Ryce, M.B., B.Ch., B.A.O., private study.

DOUBTFUL PICKLES.—A pickle and jam manufacturer of Exeter was prosecuted by the City Council on April 22nd for having in his possession for sale as food half a cask of red cabbage which was mouldy and rotten, some onions which were unfit for use, and six dozen bottles of pickles which were mildewed and stinking. The magistrates thought that the case was a proper one to bring forward, but the defendant was discharged as there was a doubt whether the articles in question were intended for food.

THE BIRMINGHAM GENERAL HOSPITAL AND SIR JOHN HOLDER.—The Board of Management of the Birmingham General Hospital has recently decided that a portrait of Sir John Holder shall be painted in order to commemorate his services to the institution. Sir John Holder is chairman of the Building Committee, by whose exertions the new general hospital was erected at a cost of over £200,000. A replica of the portrait is to be presented to Lady Holder. It is intended that the presentation shall be from those only who are interested in the hospital. The new building was opened free from debt in 1897 by Princess Christian.

MEDICAL FEES.—At the St. Austell (Cornwall) County Court on April 23rd Mr. R. F. Stephens, M.R.C.S. Eng., L.S.A., sought to recover £18 from a man residing at Pentewan for professional services. Defendant admitted having had a long illness, but said that other members of the family were included in the account. His Honour Judge Granger said that there had not been the slightest attempt to pay the money, the fact being that some people thought that a medical man was the last person to be paid, and that because he was unwilling to sue them they could thus avoid the debt. An order was made for the payment of £16.

SANITATION IN RURAL DEVONSHIRE.—Mr. S. Noy Scott in his annual report for 1900 as medical officer of health of the Plympton (Devon) Rural District Council states that the majority of the cottages and isolated houses are provided with closets over cesspits. He frequently finds an owner willing to abolish a cesspit, but the occupier raises all sorts of objections which are sometimes so strong as to prevent the closet being used after it is erected. It is by no means uncommon for the earth-closet to be converted into a toolshed, storehouse, or used entirely as a washhouse. Mr. Noy Scott considers the earth-closet worked on the bucket system to be the best method of excrement disposal for isolated cottages in a rural district.

FREEMASONRY: *Æsculapius Lodge, No. 2410.*—The last meeting for the present Masonic year was held at the Hotel Cecil, Strand, on April 24th, Bro. Montague Chenle, M.R.C.S. Eng., D.P.H. Cantab., the Worshipful Master, being in the chair. Bro. Ernest Clarke, M.D. Lond., F.R.C.S. Eng., was unanimously elected Worshipful Master for the ensuing year. Bro. G. Danford Thomas, M.D. Brux., Coroner for London and Middlesex, was re-elected Treasurer,

and Bro. Thomas Dutton, M.D. Durh., M.R.C.P. Edin., was reappointed Secretary. The Secretary was instructed to send a letter of congratulation to Bro. Captain Percy J. Probyn, R.A.M.C., D.S.O., and Bro. W. Washbourn, M.D., C.B., on the very distinguished and gallant services which they have rendered to their country in South Africa. Five guineas were voted to the British Medical Benevolent Fund. After all business had been transacted the lodge was closed. 33 of the members afterwards dined together.

CHORLEY JOINT HOSPITAL.—Mrs. Ainsworth of Rivington opened on April 27th a new hospital for infectious diseases at Heath Charnock. It has cost £17,000. The Chorley Corporation, the Adlington and Leyland District Council, and the Rural District Council have contributed towards this outlay. The hospital contains accommodation for 36 beds and is well situated.

HIS Majesty the King has consented to become the patron of the Church of England Temperance Society.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Military Drill for Boys and Youths.

The House of Lords has given its assent to the second reading of the Bill approved by the Headmasters' Conference for providing for boys and youths attending school a certain amount of military drill. The representatives of the Government, while allowing the stage to be taken unchallenged, intimated that the measure will have to be submitted to rigid examination by the responsible departments. It may therefore be taken that the Bill will not be allowed to pass, at any rate in its present form.

Isolation Hospitals Bill.

This important measure, which is designed mainly for the encouragement of isolation hospitals, has passed through the Grand Committee of the House of Commons on Law. Its provisions enable local authorities who have provided hospitals to transfer them, with the sanction of the Local Government Board, to county councils, and further authorise the latter bodies, again with the sanction of the Local Government Board, to make annual contributions towards the maintenance or extension of hospitals in the hands of local authorities. The question of giving county councils power to lease hospitals was raised in the Grand Committee, and the President of the Local Government Board undertook to consider the matter before the report stage of the Bill. Mr. Long accepted an amendment enabling county councils to contribute to hospitals outside their area of jurisdiction. Some argument arose on the requirement of the consent of the Local Government Board as a condition of contribution by the county councils. Mr. Long explained that this requirement is really in the interests of county councils, because, as he said, great pressure may be brought to bear upon these bodies to contribute to hospitals which are of an unsatisfactory character. He had taken the advice of the chief medical officer of the department on the subject, who thought it was absolutely necessary, in the interest of the public health, to have this requirement. Sir Walter Foster expressed his concurrence in this view and the Grand Committee decided to retain the requirement.

HOUSE OF COMMONS.

THURSDAY, APRIL 25TH.

Plague at the Cape.

MR. MACNEILL asked the Secretary of State for the Colonies whether he was aware that the bubonic plague now raging in Cape Town and its vicinity had assumed serious proportions; whether the statistics published of those who had taken this disease and of those to whom it had proved fatal were confined to cases in Cape Town itself; and whether he could state the numbers in Cape Colony who had been affected with and who had succumbed to this disease; and whether he would include the total number of the sufferers from this disease and the deaths caused by it in the published weekly returns.—MR. CHAMBERLAIN replied: The publication of statistics is a question within the province of the Government of the Cape Colony, but I am asking the Cape Government if they will supply in the weekly bulletins the additional information desired by the hon. Member as to the total numbers of those affected by, and of the deaths from, the disease.—MR. MACNEILL asked the Secretary of State for the Colonies whether his attention had been called to the fact that the German authorities had already taken action to prevent infection from the bubonic plague now raging in Cape Colony from reaching German ports; and whether any steps had been taken to prevent infection from reaching this country in ships bound to this country from South Africa, and, if not, whether any such precautionary measure was contemplated.—MR. WALTER LONG replied: My right hon. friend has asked me to reply to this question. I am aware of the action taken by the German Government. Arrangements are made by the sanitary authorities at the ports in this country for the examination of all vessels coming from places affected with plague and for taking such action as may be necessary for dealing with persons or things on board from which danger of infection is apprehended. Special memoranda prepared by the medical officer of the Local Government Board with respect to plague have been issued to the local authorities and such further advice and instructions as may from time to time be found requisite will be issued to them. Where exceptional circumstances render it expedient it is my practice to send a medical inspector to confer with the port authorities and their officers. I can assure the hon. Member that everything that can be done will be done to prevent the possibility of the spread of the disease.

FRIDAY, APRIL 26TH.

Small-pox in Lisburn.

MR. DALY asked the Chief Secretary to the Lord Lieutenant of Ireland whether he was aware that a serious outbreak of small-pox had occurred in Lisburn and whether he could state what measures had been taken to stamp it out.—MR. GEORGE WYNDHAM replied that the medical inspector of the Local Government Board had conferred with the local authorities on the steps to be taken for preventing the spread of the disease. They were fully alive to the importance of taking effective precautionary measures and were at present considering the question of providing an isolation hospital.—MR. BARTLEY asked whether steps would be taken to enforce the Vaccination Acts.—MR. WYNDHAM said he had no reason to believe that the Acts were not enforced.

MONDAY, APRIL 29TH.

Small-pox Precautions.

SIR JOHN LENG asked the Lord Advocate whether he would take steps to prevent manure being sent from Glasgow, where for months past small-pox had been prevalent, for distribution in the county of Fife from railway stations in burghs which held clean bills of health, or whether he would point out to the local authorities what means they could take to prevent the risk of spreading small-pox by such distribution.—THE LORD ADVOCATE replied: Unless there is a legal warrant for the assumptions made by the hon. Member in the question which would require specific proof of injury or danger to health there exist no statutory powers under which such distribution can be prevented, having in view the judicial interpretation which has been put upon the provisions of Section 16, Sub-section 5, of the Public Health Act, 1897.

Water Purchase Schemes.

MR. PARKER asked the President of the Local Government Board whether the Government would consider favourably a proposal to authorise local authorities to compel water companies to sell their undertakings, the price to be fixed by arbitration in default of agreement; and whether they would support the repeal of the provisions in the Borough Funds Act, 1872, which required the consent of owners and ratepayers to be obtained to the promotion of, or opposition to, a Bill by a local authority.—MR. WALTER LONG replied: I am afraid that the answer to the first part of the question must be in the negative. With regard to the second part I am not prepared to say that no consent on the part of the inhabitants of a district should be required for the promotion of a Bill by the local authority, though I doubt whether such consent is necessary in the case of opposition to a Bill. My hon. friend the Member for South Islington (Sir Albert Rollit) has before the House a Bill to amend the Borough Funds Act, 1872, and I am disposed to concur generally in the proposals in that measure.

Irish Whisky as Medicine.

In the course of a debate on the spirit duty MR. TULLY put forward the novel proposition that Irish whisky has very little intoxicating qualities and is largely used for medicinal purposes.

TUESDAY, APRIL 30TH.

Death Certification in Scotland.

MR. WEIR asked the Lord Advocate, having regard to the fact that in the Western Highlands and Islands of Scotland a number of interments took place without the production of a medical certificate of death, if he would state what steps it was proposed to take to remedy this state of matters.—THE LORD ADVOCATE replied: A medical certificate of death is not a necessary condition of burial in any part of Scotland. No action could be taken in the matter without legislation, which it is not at present proposed to undertake.

Medical Practitioners and the Royal Naval Reserve.

Captain JESSEL asked the Secretary to the Admiralty if he would explain why the privilege of serving in the Royal Naval Reserve was denied to medical practitioners, and whether, in view of the duties which the surgeons of the royal navy would have to undertake in time of war, he would consider the desirability of forming a medical branch of the Royal Naval Reserve.—MR. ARNOLD-FORSTER replied: This question has been under the consideration of the Admiralty on several occasions, but it has not been thought desirable to form a medical branch of the Royal Naval Reserve. Emergencies will be met by the entry of surgeons for temporary service, for which special regulations have been drawn up and circulated through all the universities and medical schools.

HOURS OF LABOUR IN SHOPS.

EVIDENCE FROM SIR WILLIAM S. CHURCH AND SIR WILLIAM MAC CORMAC.

On April 29th, Sir WILLIAM S. CHURCH, President of the Royal College of Physicians of London, gave evidence before the Select Committee of the House of Lords on the hours of labour in shops. Before addressing questions to Sir William Church the Chairman of the Committee, Lord AVEBURY, explained that in 1886 there was a Committee of the House of Commons on the Shop Hours' Regulation Bill which in a unanimous report stated that in many places the hours of labour in shops ranged from 80 to 85 per week, and that in the opinion of the committee such hours were injurious to health and in many cases, especially among women, caused illness. The then President of the Royal College of Physicians of London issued a circular to the medical men of the metropolis and in consequence of this circular more than 300 medical men signed a petition declaring the hours to be injurious to health and praying the House of Commons to pass into law the Early Closing Bill introduced by Sir John Lubbock (now Lord Avebury). The present Committee had learned in evidence that these long hours continued and in some cases

had been increased, and he wished to know from Sir William Church whether he concurred in the views of these 300 medical men that such hours were grievously injurious to health.—Sir WILLIAM CHURCH replied that it was self-evident that 14 hours per day of confinement in a shop must be prejudicial to those exposed to it. He was not sufficiently acquainted with the subject to know how far it was possible or desirable that individual labour should be controlled by the State and he should therefore desire to confine himself to the medical aspects of the case. He was strongly of opinion that the present long hours in shops were injurious to health.—In reply to the Earl of HARDWICKE, Sir WILLIAM CHURCH said that he was not sufficiently acquainted with the subject to express an opinion on Lord Avebury's Bill for the earlier closing of shops. There were other things besides the hours of labour to consider. For instance, there was the condition of the buildings, their ventilation, and other matters which he thought might be regulated rather than that the State should intervene and set a particular hour at which closing should take place. It had occurred to him that in the case of small shops, say in provincial towns, the business was managed by members of the family who were not continually in the shop throughout the hours of opening. To lay down a hard-and-fast law as to closing might be rather harsh upon the occupiers of such shops. But, of course, it was merely an opinion.—The CHAIRMAN explained to Sir William Church that in his Bill the hours of closing were left to the decision of the majority of the local shopkeepers and were not laid down by enactment, and further that it had been brought out in evidence that the small shopkeepers were themselves anxious for some measure of the kind.—Sir WILLIAM CHURCH, in answer to the CHAIRMAN, said that he had no hesitation in expressing to the committee his opinion that there were certain forms of weakness and disease which were extremely aggravated by long hours of more or less—not sedentary but not active—employment. This was especially the case when the shops were lighted by gas. The evil was not merely the presence in the shop, but the absence of opportunities for getting fresh air and exercise.—In reply to the Bishop of WINCHESTER, Sir WILLIAM CHURCH said that there were two great classes of ailments which were aggravated by work like that of shop assistants. There was the class which came within the cognisance of surgeons, and those physicians who practised more especially among the diseases of women. But there was another great group which fell to the ordinary physician and of which they saw a great deal in the London hospitals—that was the anæmic condition produced partly by the long hours and still more by the confinement which such an employment as that of a shop assistant entailed. These patients did not get sufficient opportunity of being in the fresh air and sunlight, and their condition was greatly aggravated by late hours at night. It was the confinement rather than the labour which caused the mischief. Personally he had not paid much attention to the question of legislation, but he should not have thought that the necessity was greater than in the case of other workers, such as clerks and people of that sort, in the big towns. He was, however, only speaking of the evils produced from confinement in a more or less contaminated atmosphere, and he said that the detriment to the shop assistants was very much akin to the detriment which fell upon other workers. Of course, the longer the hours the greater the detriment.

At the same sitting of the Committee Sir WILLIAM MAC CORMAC, President of the Royal College of Surgeons of England, was examined. His evidence was to the effect that such long hours of labour in shops as had been brought to the notice of the Committee tended very much to lower the vitality of the workers and rendered them more liable than they otherwise would be to attacks of different forms of disease. The night hours were spent in an atmosphere very prejudicial to health, an atmosphere which contributed largely to the production of various forms of tubercle. He held strongly the opinion that moral and physical well-being depended largely upon one another. If the physical condition of a man or woman was affected, the moral nature must also suffer to some extent. He was of opinion that this subject was worthy of the attention of the Government and of Parliament all the more because, although it could not be said in one sense to be urgent, the evil was insidious, gradual, and progressive in its effect. From generation to generation the population would become feebler if the evil were not resisted. The question of the work being a strain was not the point, but rather the conditions in which the work was carried on.

ROYAL COMMISSION ON ARSENICAL POISONING.

FRIDAY, APRIL 26TH.

THE Royal Commission on Arsenical Poisoning resumed its sittings in London to-day and examined a number of witnesses. The members of the Commission are Lord Kelvin (Chairman), Sir William Hart Dyke, M.P., Sir William S. Church, Professor Thorpe, Dr. Whitelegge, and Mr. Cosmo Bonsor, with Dr. G. S. Buchanan as secretary.

Mr. HENRY A. TAYLOR, of Messrs. H. A. and D. Taylor, maltsters, Ware and Bishop Stortford, gave evidence as to the processes of malt-making. He expressed some objection to the habit of brushing malt, his view being that it gave an artificial value and made mouldy malt look as well as good malt. His firm, he said, used only anthracite coal, and from the results of analysis he gathered that the best anthracite coal contained little or no arsenic. He did not think, however, that anyone could guarantee any coal to be absolutely free from arsenic, and if the coal could not be guaranteed neither could the malt made with it.

Mr. CORNELIUS O'SULLIVAN, chief brewer and chemist to Messrs. Bass, Ratcliff, and Gretton, Burton, was the next witness, and in the course of his examination he said that when it became known, through the daily papers, about Nov. 23rd last, that arsenic was found in some beers, although the source whence it was derived was clearly indicated, it was deemed desirable as a precautionary measure by the Burton brewers, in common, no doubt, with the brewers all over the country, that every source by which arsenic could be introduced into beer should be carefully examined, and as the sugars of different kinds employed as malt substitutes were the sources chiefly implicated, at least to begin with, the use of these was discontinued in most cases at once, although examinations had since shown the precaution unnecessary; the sugars, as a rule, had been found free from arsenic, or at least practically so. Further, it was considered desirable that all beers in stock should be examined by the local staffs and by outside authorities. Burton brewers had, as a rule, competent chemists on their staff, and those who had not employed such men outside. The general results were that the beers were declared practically free from arsenic. But when developments took place and when the academical side of the question took the place of the practical one it was found that there was yet something to learn as to the presence of minute quantities of arsenic in beer and as to the sources thereof. It was observed that in some of the beers these minute quantities of arsenic were greater than in others. The cause of this was inquired into and it was soon established that malts dried with a proportion of gas-coke contained much more arsenic than malts dried with a proportion of oven-coke. These facts were confirmed by outside observation. The use of these malts was at once discontinued and as a further precautionary measure even oven-coke was as a rule discarded and the cleanest anthracite alone employed. For many years Burton brewers had used little or no gas-coke, for the simple reason that it imparted a smoky disagreeable flavour to the malt, which was carried to the beer. Of course, as far as practicable, they bought no such malt. But inasmuch as outside maltsters recognised this fact care was taken by them to eliminate the flavour by selecting the gas-coke they employed, so that in most cases it was impossible from the odour alone to distinguish gas-coke dried malt from any other. It appeared, however, that the selection of the non-flavour-giving varieties of gas-coke did not also eliminate the arsenic-containing ones. Hence it was deemed desirable to discontinue the use of all outside malts until they were tested and found to be practically free from arsenic. All these precautions notwithstanding, it was still observed that all the beers were not absolutely free from arsenic when the rigorous test was applied; quantities varying between 1-100th to 1-500th grain per gallon and practical purity were certified to by competent authorities. He might mention, as an example, that he had had examined by a leading authority, with whom his own observations were in broad agreement, 32 samples of different beers, the products of some of the chief breweries of England, Ireland, and Scotland, and of Holland, with the results that they were found to contain quantities of arsenic trioxide varying between 1-50th of a grain per gallon and practically *nil*. The *nil* samples amounted to three in the 32, and he believed two of these were part sugar beers, or beers brewed with part grits, made from flaked maize or rice. This being the case the cause of it and the means of obviating it had to be sought for. An examination of malt dust—i.e., the dust obtained on screening and fanning the malt after the grosser rootlets had been eliminated—showed that it contained much more arsenic than the malt itself; hence it had been decided to put up apparatus containing brushes and screens of the highest efficiency. They would still further reduce the infinitesimal quantities of arsenic in beers, but he could not hope that they would be thereby absolutely eliminated. Hops had also been carefully examined and although many growths had to be rejected in consequence of the large quantity of free sulphur they contained, very few samples had been found to contain arsenic—in fact, they might so far be said to be absolutely free. As, however, sulphur washes were used during their growth, as they were frequently treated with free sulphur when maturing, and as sulphur was used in kiln fires during drying, it would not be surprising if hops, too, were on investigation found to supply their quota, however small, of arsenic to beers. This was also a contingency against which brewers would, of course, have to guard. He had indicated the precautions taken which were considered desirable with the view of eliminating the risk of introducing even minute quantities of arsenic into beers and partially the results that might be expected. All the precautions taken had led to a large diminution, but he could not say that they had so far effected complete elimination in all cases. He believed it could be shown that beer must have contained minute quantities of arsenic from time immemorial, but he believed there was no evidence that any effects injurious to health attributable to this quantity of arsenic had so far been recorded. Methods for the detection of arsenic in beer were given in analysis books, but it was fairly clear that this arsenic was supposed to be introduced by accident or malicious intent. He did not wish to deal with the methods of determination of minute quantities of arsenic, but he must say that he believed that they were in some hands broadly satisfactory as far as they went. He was, however, strongly of opinion that this matter should be treated as the Water Commission treated the pure water question—that was, institute an inquiry into the matter with Governmental authority so that practical methods might be established and uniform results insured.

Sir T. LAUDER BRUNTON then made a statement to the Commissioners which will be found on page 1357.

In reply to questions addressed to him by Sir WILLIAM CHURCH, Sir T. LAUDER BRUNTON said that while as a general rule women could take less arsenic than men it might be in the case of the Manchester epidemic that the women consumed more beer than the men did and perhaps were always supplied with the same kind of beer. It was possible, too, that the greater physical labour of the men led in their case to more rapid elimination of the arsenic. Asked whether anything had occurred to him as explaining the delay of the medical profession generally in recognising that this disease was due to arsenical poisoning and not to alcohol or other poisoning, Sir T. Lauder Brunton said that the explanation might be their familiarity with cases of neuritis; they associated neuritis with alcohol and nothing else. He once came across rather a curious observation in regard to different kinds of wines. It was made to him by the landlord of a hotel above Montreux and it was to the effect that the people in the Rhone Valley who drank the white wine became affected with tremors, whereas the people who drank the red wine in the same locality did not suffer in the same way. It was suggested to him that the white wine was often more or less sweetened with glycerine and that the glycerine might contain arsenic, and these people who drank the white wine might really be suffering from arsenical tremors. With regard to guarantees of purity he thought that practically what was wanted in this country was something analogous to the Gesundheitsrath in Germany—something in the nature of a Board of Public Health. This board should have at least one member thoroughly acquainted with the management of public health, a thoroughly trained chemist, a

bacteriologist, a pharmacologist, and a medical man. Probably it would be well to have two representatives of each branch. It would be a board of reference and he supposed would come into relations with the Local Government Board.

By Professor THORPE: If such a board, after taking such evidence as it thought fit, should come to the conclusion, say, that an antiseptic like borax was injurious, then instructions would be given to medical officers of health that in all cases where borax was found proceedings should be taken. What was wanted was an advising board to whom such questions should be referred.

By Dr. WHITELEGGE: He had been told that British barley contained a much larger quantity of nitrogenous substances than foreign barley, and that if malt were made with British barley without the addition of glucose to counterbalance the nitrogenous matter they were bound to have a very heavy beer.

The Commission then adjourned.

SATURDAY, APRIL 27TH.

The Commission met again to-day and examined several more witnesses.

Mr. RICHARD CHARLES GARTON, of Messrs. Garton, Hill, and Co., brewing-sugar manufacturers, Battersea, said that his father, who established the firm in 1860, was the first to introduce into this country invert sugars for use in brewing, and that at the present time the firm made not less than 45 per cent. of the brewing sugars manufactured in this country. In time the firm began the making of glucose and afterwards of a brewing sugar known as dextrin-maltose. These three articles were produced by the action of sulphuric acid either on cane sugar or starch, the sulphuric acid used being in all cases wholly removed as soon as the action had proceeded far enough by being neutralised by the addition of a base which converted the sulphuric acid into an insoluble compound. The resulting product contained no trace of sulphuric acid. The proportion of acid employed to effect inversion of cane sugar varied from ½ to 2½ per cent., according to the amount of ash in the raw sugar. As to glucose, the proportion of acid required for conversion depended upon the character of the starchy material employed. It would require from 4½ per cent. in the case of starch made from maize up to 8 per cent. for sago and tapioca flour. The average percentage of acid used by his firm in the making of glucose was 5½ per cent. The dextrin-maltose was substantially a glucose and was made in the same way, the only difference being that the time allowed for the operation was less. At the commencement the firm only used brimstone acid because the liability of pyrites acid to contain arsenic was, of course, well known to them as to every manufacturer who used sulphuric acid for any purpose. The firm from whom they obtained their sulphuric acid suggested that they should use purified pyrites acid, showing them that it was as pure as brimstone acid. They satisfied themselves by means of careful investigation that this was so and the firm in question were allowed to supply purified pyrites acid which they had repeatedly guaranteed to be free from arsenic. Witness had perfect confidence in this firm, but his own firm still thought it right to keep a check on the supply by examining every barge-load of acid and periodically testing for each specific impurity. The difference between sulphuric acid free from arsenic and not free from it was so well known to every manufacturer of the acid, or user, that when dealing with a firm of good standing, and stipulating that the acid should be free from arsenic, there never had been any danger of impure acid being supplied. It would make no difference whatever to his firm if they were required to purchase their acid on a statutory guarantee of purity or to sell their products under a like guarantee, and any recommendation of the Commission in this respect would be willingly accepted by his firm and would not interfere with their ordinary mode of business. The products of his firm were in no sense adulterants or substitutes for better material. One or other of them was used by all the best brewers in the kingdom often without any economy, and solely for improvement of quality, and in other cases because they could obtain an equal or superior quality at less cost and trouble. So far from these products belonging to the type of adulteration they represented the real growth of the science of brewing, and the excellence of the products went hand in hand with the increase of skill in using them. Glucose and dextrin-maltose were derived from pure starch just as much as the maltose which was formed in the mash tun and by an equally pure process. They were sugars of the same type as the maltose and in every sense as suitable for the purpose. But they had the great advantage that they could be made free from those types of nitrogenous matter found in barley malt which constituted one of the greatest difficulties in brewing English beer, their removal necessitating prolonged storage of the beer and the employment of much hop. It thus put a definite material in the hands of the scientific brewer by which he could obtain complete control over the article produced. With regard to the invert sugar, it was a far more expensive article for the brewer than the cane sugar itself, and the whole manufacture was for the purpose of giving him a more readily fermentable sugar than cane sugar, which cannot be employed without materially weakening the yeast. So important were those properties that all modern ale required their use. As compared with malt there was no economy in the use of invert, as a pound of extract obtained from invert was about the same cost as that obtained from malt, and yet three-quarters of the total production of his firm consisted of this substance. It was for the results of the brewing, and not for lessening the cost of the materials, that it was employed.

Dr. THORNE, chemist to Messrs. Garton, Hill, and Co., stated, in reply to Sir William Church, that he had never found selenium in pyrites acid but he had found infinitesimal traces of it in brimstone acid and his opinion was that there was less risk of selenium in pyrites than in brimstone acid.

Dr. NATHAN RAW, medical superintendent of the Mill-road Infirmary, Liverpool, and consulting physician to the West Derby Union Workhouse, said that the recent epidemic of arsenical poisoning in Liverpool did not seem to have been so extensive as in Manchester, although some of the cases had been of a severe type. During the last three years, out of 12,823 patients admitted into Mill-road Infirmary under his care there had been 226 cases of peripheral neuritis, of which number 153 had presented symptoms which might be attributed to arsenic. Of these 226 cases of peripheral neuritis 51 died, the apparent cause of death being general asthenia, with cardiac failure in most of the cases. Witness presented a table showing the number of cases of neuritis admitted into Mill-road Infirmary during 1898, 1899, 1900, and the period of 1901 from Jan. 1st to April 22nd. In 1898 there were 26 cases; in 1899, 34; in 1900, 143; and in the period of 1901, 23 cases. Reviewing the epidemic as a whole and after very careful observation he had noticed the cases to be divided into two important classes. 1.—The acute. Of these he had only seen 17 cases. They occurred late in the epidemic, about the beginning of December, and presented a totally different set of symptoms from those of the more advanced or chronic cases. These cases had the appearance of having been suddenly and acutely poisoned with a large dose of arsenic. The symptoms, although acute for a few days, soon passed off, and the patients made a rapid recovery, and in all cases were discharged recovered. 2.—The chronic cases. These formed by far the greater number, and on admission presented the usual symptoms of peripheral neuritis and had the appearance of some slow and chronic form of poisoning attributed at that time to alcohol. Although he had been in the habit of seeing cases of alcoholic neuritis for the last 15 years he had not noticed any difference in the character of the symptoms in patients admitted into this infirmary until the beginning of August, when a few of the patients showed well-marked general pigmentation of the skin, which for want of a better diagnosis was attributed to Addison's disease. During the next three months six cases were diagnosed as Addison's disease, although it was felt at the time that the cases were not typical of that affection. Of these six cases three died and on post-mortem examination no evidences whatever were found to confirm the diagnosis of Addison's disease; on the contrary, the cause of death seemed to be alcoholic neuritis. It was not until the paper of Dr. Reynolds appeared at the end of November that his attention was directed to arsenic, and then, of course, the epidemic was explained and steps were at once taken to prevent its spread. With regard to the cause of alcoholic neuritis he was convinced, from a very careful observation of a very large number of cases, that beer and porter were the general drinks consumed, by far the greater number being due to beer alone, but he had certainly seen cases of undoubted alcoholic neuritis in which the patients had only taken brandy or whisky. With regard to this point his experience whilst in charge of a large Scotch hospital for four years was of interest, as during the whole of that time he only saw four cases of peripheral alcoholic neuritis, and it was well known that the popular drink in Scotland was whisky. He believed also that the serious lesions were caused by the continual drinking of moderate quantities every day for prolonged periods rather than to sudden outbursts where large quantities were taken and rapidly excreted. The great majority of cases of ordinary alcoholic neuritis occurred amongst women of the poorer classes, and in Liverpool it was the custom for these women to congregate in each other's houses and send for cheap beer during the whole of the day. By consuming it off the premises they got what was called "the long pull," which meant that they got a good deal more beer than they asked for. In some of the samples of beer examined by the public analyst of Liverpool as much as one and a half grains of arsenic to the gallon were found. This, of course, was an extreme amount, and the general adulteration varied from one-thirtieth grain to one-tenth grain of arsenic per gallon. In one particular case of acute arsenical poisoning a man who had previously been a teetotaler for six months drank 42 pints of beer in two days. On the second day afterwards he was seized with all the symptoms of acute poisoning, and on admission to hospital was very seriously ill. On examination of his urine arsenic was found in large quantity. The symptoms passed off rapidly and within a fortnight he left the hospital quite cured. This was an example of a large amount of arsenic having been taken into the system in a short period of time, but in the great majority of the cases small quantities of arsenic had been taken spread over a prolonged period. In many cases patients would only admit to having taken small quantities of alcoholic liquors. The symptoms and appearance had been so ably and fully described by various observers that it was not necessary to refer to them, but he had observed a few interesting points which, so far, had not to his knowledge been recorded.

By Dr. WHITELADOK: Of the 143 cases occurring in 1900 17 proved fatal. In some of the cases the paralysis apparently was permanent, at any rate, it was very inveterate and had not yet shown any improvement.

By the CHAIRMAN: In his opinion, arsenic accentuated to a marked degree the symptoms of alcohol. There were, as it were, two types—one which arose from alcoholic excess and one which was increased in its intensity by the presence of arsenic. Very small quantities of arsenic in beer would produce severe symptoms.

By Sir WILLIAM CHURCH: In the case of the man who had been teetotal for six months and afterwards drank 42 pints of beer in two days the symptoms were gastro-intestinal and sensory, the latter being the most marked. There was no paralysis in his case.

Dr. RAW then went on to say that two kinds of pigmentation were met with in arsenical poisoning—one, which was a general darkening of the whole surface of the body, did not desquamate. This appeared slowly and disappeared very slowly. The other form was one in which the skin became dark in colour rapidly, especially attacking the flexures, the breast, and the front of the abdomen. The epidermis desquamated freely and could be pulled off, leaving a normally coloured skin underneath. The first variety of pigmentation was met with in the earlier part of the epidemic; the second class only towards the end of the epidemic; and to his mind it seemed to suggest some rather serious increase of the contamination of beer. He had noticed in two cases under his care at present a complete relapse of all the symptoms. The patients were apparently well; pain had disappeared, and the desquamation of the skin had been complete when, without any warning, a fresh attack of neuritis developed, as acute as before, with a general discolouration and desquamation of the skin.

By the CHAIRMAN: The relapse took place without more drinking. In both these cases arsenic was found in the urine shortly after admission. The urine was examined at the time of the relapse and no arsenic was found then.

Dr. RAW, continuing his statement, said that he had been able to find arsenic in the urine in six cases out of 34 examined, but in no case was he able to find it after 10 days from admission. With regard to the cause of peripheral neuritis in general he was of opinion that beer and porter were by far the commonest causes of the disease, yet he had seen undoubted cases caused by spirit-drinking. It was extremely difficult to get a reliable history of drinking from many patients, but he had

undoubted cases where the disease was produced entirely by spirits. He had also seen cases of peripheral neuritis caused by the medicinal administration of arsenic in disease; these symptoms, however, had quickly passed off on the cessation of the drug. After a careful observation of the epidemic he had come to the conclusion that the sensory symptoms were more pronounced in arsenical neuritis than in ordinary alcoholic neuritis and, although very severe at first, they soon passed away. The motor symptoms tended more quickly to recovery under treatment than the purely alcoholic cases, and most of his patients had completely recovered, although a few were making little progress. When one considered the enormous number of people who had been drinking this beer, which had in some cases in Liverpool contained one and a half grains of arsenic to the gallon, one was bound to think that some people were more susceptible to arsenic than others, as only a very small proportion had been attacked. It was apparent, too, that arsenic was a cumulative poison to some extent. It would seem also that the action of the arsenic in the system was more virulent in the presence of alcohol than when given alone. So far as Liverpool was concerned the epidemic was at an end and he had not had a new case of arsenical poisoning during the last nine weeks. It was just possible that with greater care in the manufacture of beer alcoholic neuritis might become much less frequent and he had noticed that since the epidemic of arsenical poisoning in Liverpool the amount of alcoholism had much decreased, a state of matters which he sincerely hoped would continue.

By the CHAIRMAN: His opinion was that the epidemic had given the community of Liverpool a great fright and alcoholism had been reduced in consequence.

By Dr. WHITELEGGE: He regarded alcoholic neuritis as existing quite apart from arsenic. In his opinion it had references more to beer and porter than to spirits and he thought that there would be alcoholic neuritis even if there were no arsenic in beer or porter.

By Sir WILLIAM CHURCH: He could not account for there being more alcoholic neuritis in Liverpool and Manchester than in London, which also had a beer-drinking population. He would not like to express the opinion that the people of Liverpool and Manchester drank more than the people of London.

Mr. GEORGE E. DAVIS, chemical engineer, and consulting chemist of the Manchester Technical Laboratory, the last witness examined, gave evidence as to the sulphuric acid industry. Among other things, he said that when the sulphuric acid was sufficiently diluted and kept cool it was possible to eliminate the whole of the arsenic if the operation was properly conducted. Such acid was even better than acid made from brimstone for many purposes, as the sulphuretted hydrogen also purged the acid of its nitrous contents, which were very detrimental in some processes, such as the manufacture of aerated waters and the preparation of some colouring matters.

BOOKS, ETC., RECEIVED.

BALE, SONS, AND DANIELSSON, Great Titchfield-street, London.
Records from General Practice. By J. K. Barton, M.R.C.P., &c. Price 2s. 6d.

BELL AND SONS, Covent-garden, London.
The Penalty of Death; or, the Problem of Capital Punishment. By Josiah Oldfield, M.A., B.C.L., L.R.C.P., &c. Price 3s. 6d.

CARRÉ ET C. NAUD, Rue Racine, Paris.
L'Evolution du Pigment. By Dr. C. Bohn. Price 2 francs.

GRIFFIN AND COMPANY, Exeter-street, Strand, London.
A Short Manual of Inorganic Chemistry. By A. Dupré, Ph.D., F.R.S., &c., and H. Wilson Hake, Ph.D., F.I.C., &c. Third Edition. Price 9s.
Pernicious Anæmia: its Pathology, Septic Origin, Symptoms, Diagnosis, and Treatment. By William Hunter, M.D. Edin., F.R.C.P. Lond., &c. Price 24s.

KING AND SON, Great Smith-street, London.
The Economic Disposal of Town's Refuse. By W. F. Goodrich, A.I.M.E. Price 10s. 6d. net.

LIPPINCOTT COMPANY, Philadelphia and London.
The History of Medicine in the United States. By F. R. Packard, M.D. Price 21s.

MACDOUGALL, ALEX., Mitchell-street, Glasgow.
Transactions of the Glasgow Obstetrical and Gynæcological Society. Vol. ii. Price not stated.

MASSON ET CIE., Boulevard St. Germain, Paris.
Physiologie, Normale et Pathologique, du Pancréas. By E. Hédon. Price 2 francs 50 cents.
Traité de Chirurgie d'Urgence. By Félix Lejars. Third Edition. Price 25 francs.

SAUNDERS AND COMPANY, London and Philadelphia.
Anatomical Atlas of Obstetrics, with special reference to Diagnosis and Treatment. By Dr. Oskar Schaeffer. Edited by J. Clifton Edgar, A.M., M.D. Price 13s. net.
Atlas and Epitome of Labour and Operative Obstetrics. By Dr. Oskar Schaeffer. Edited by J. Clifton Edgar, A.M., M.D. Price 9s.
A Text-book of the Practice of Medicine. By Dr. Hermann Eichhorst. Edited by Augustus A. Eshner, M.D. In two vols. Price 28s.

SCOTT, WALTER, Paternoster-square, London.
The Mediterranean Race: a Study of the Origin of European Peoples. By G. Sergi. Price 6s.

SMITH, ELDER, AND CO., Waterloo-place, London.
Surgical Experiences in South Africa, 1899-1900, being mainly a Clinical Study of the Nature and Effects of Injuries produced by Bullets of Small Calibre. By G. H. Makins, F.R.C.S. Price 16s.

SOUTHLAND TIMES COMPANY, Invercargill, New Zealand.
Standing Orders and Bye-laws of the Borough of Invercargill, N.Z. Price not stated.

STOCK, ELLIOT, Paternoster-row, London.
Modern Natural Theology. By F. J. Gant, F.R.C.S. Price not stated.

THIEME, GEORG, Leipzig.
Handbuch der Physikalischen Therapie. By Dr. A. Goldschieder and Dr. Paul Jacob. Price 15 marks.

TOWNSEND AND SON, London and Exeter.
Thirty-one Twenty-four Hour Charts for Private Nurses. By Florence White. Price 1s.

UNIVERSITY PRESS, Cambridge, Mass., U.S.A.
An Introduction to Physiology. By W. T. Porter, M.D. Price not stated.

UNWIN, T. FISHER, Paternoster-square, London.
Manners for Girls. By Mrs. Humphry. Price 1s.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

ANNIS, E. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health, Borough of Greenwich.

BARBOR, H. T., M.D. Lond., M.R.C.S., L.R.C.P., has been appointed Clinical Assistant to the Royal Eye Hospital, Southwark, London.

BOWER, G., L.R.C.P., L.R.C.S. Edin., D.P.H. Vict., has been appointed Medical Officer of Health, Sutton Urban District, Surrey, vice E. L. Jacob, resigned.

BRADSHAW, THOMAS R., B.A., M.D. Dubl., M.R.C.P. Lond., has been appointed Consulting Physician to the Samaritan Hospital for Women, Liverpool.

CAIRNS, L. M., M.B., C.M. Edin., has been appointed District Medical Officer, Huddersfield Union, vice J. E. Richards, resigned.

CANN, T. P., M.B., B.S. Durh., has been appointed Medical Officer of Health, Newhaven Urban District, vice A. G. Mossop, resigned.

CONNELL, ARTHUR, M.R.C.S., L.R.C.P. Lond., F.R.C.S. Edin., has been appointed Honorary Surgeon to the Royal Infirmary, Sheffield, vice Arthur Hallam, resigned.

DAWSON, W. B., L.R.C.P., L.S.A., has been appointed House Surgeon to Victoria Hospital, Worksop (the Dukeries).

DUNN, R. A., M.D. Durh., B.S., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health, East Herts and Essex Combined Districts, vice J. A. Turner, resigned.

HAMES, E. S. B., L.R.C.P. Lond., M.R.C.S., has been appointed District Medical Officer, Honiton Union, vice E. F. N. Currey, resigned.

HOLINTON, G. W., L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Medical Officer of Health, Wells Rural District, vice J. C. Smyth, resigned.

EVANS, D. R. POWELL, L.R.C.P. Lond., M.R.C.S., L.S.A. Lond., has been appointed Public Vaccinator for the North Wimbledon District of the Kingston Union, vice F. W. Parsons, resigned.

FRYER, G. E., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health, Urmston Rural District.

GALLOWAY, ALEXANDER, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Medical Officer to the South Shields District, South Shields Union.

GARDINER, A., M.B., C.M. Aberd., has been appointed District Medical Officer, Freebridge Lynn Union, vice W. G. R. Macauley, resigned.

HICK, H., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health, Romney Marsh Rural District.

HINGSTON, CHARLES ALBERT, M.D., B.Sc. Lond., M.R.C.S., has been re-appointed Honorary Physician to the Crownhill Convalescent Home, near Plymouth.

HOGAN, B., L.S.A., has been appointed District Medical Officer, Poplar Union, vice E. A. Lightburne, deceased.

HUNT, J. W., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Second Assistant Medical Officer to the Somerset Hospital, Cape Town, South Africa.

HUNTER, W. L., M.D., B.Ch. Dubl., D.P.H., has been re-appointed Medical Officer of Health, Borough of Pudsey.

HUSKIE, JAMES, M.B., C.M. Edin., has been appointed Certifying Surgeon under the Factory Acts for the Crosby District of Lancashire.

IVENS, FRANCIS, M.B. Lond., has been appointed Clinical Pathologist and Assistant Pathologist to the Royal Free Hospital, London.

LISTER, THOMAS D., M.D. Lond., M.R.C.P. Lond., F.R.C.S. Eng., has been appointed Physician to the City Dispensary, vice Ivens Spriggs, resigned.

MAUND, J. H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health, Newmarket Urban District, vice W. Hutchinson, resigned.

MONTGOMERY, SYDNEY H. R., M.B., B.Ch. Irel., has been appointed Medical Superintendent to the West Australian Government's Lunatic Asylum, Fremantle, Western Australia.

MONTGOMERY, W. P., M.B., B.S. Lond., F.R.C.S. Eng., has been appointed Visiting Medical Officer at the Crumpsall Workhouse, Manchester Union.

MOORE, P. W., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed District Medical Officer, Shardlow Union, vice W. M. Knipe, resigned.

NASH, J. T. C., M.D. Edin., D.P.H. Cantab., has been appointed Acting Professor of Hygiene at King's College, London, during the absence of Professor Simpson in South Africa.

PERRIN, THOS., L.R.C.P. Lond., M.R.C.S., has been appointed Assistant Medical Officer at the Infirmary, Parish of St. Mary, Lambeth, vice R. H. Tompsett.

PRICE, FREDERICK W., M.B., C.M. Edin., has been appointed Pathologist to the City of London Hospital for Diseases of the Chest, Victoria-park, E.

REES, J. A., M.B., C.M. Edin., has been appointed District Medical Officer, Aberystwith Union, vice J. E. Hughes, resigned.

ROBERTS, E. C., L.R.C.P., L.R.C.S. Irel., has been appointed District Medical Officer, Anglesey Union, vice W. Thomas, resigned.

SLATTERY, J. B., M.B., Ch.M. Irel., has been appointed Assistant Medical Officer at the Infirmary, Woolwich Union, vice C. C. W. Maya, resigned.

SMITH, R., M.B., C.M. Aberd., D.P.H., has been appointed Medical Officer of Health, Borough of Rawtenstall, vice J. McNaught, deceased.

STURDY, H. C., M.B., B.S., has been appointed Junior House Physician to the City of London Hospital for Diseases of the Chest, Victoria-park, E.

SPROULL JAMES, M.B., C.M. Glasg., has been appointed Medical Officer of Health, Luddenden Foot Urban District, vice T. Crowther, resigned.

WILLIAMSON, OLIVER K., M.A., M.B., B.C. Cantab, M.R.C.P. Lond., has been appointed Physician to Out-patients to the City of London Hospital for Diseases of the Chest, Victoria-park, E.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRADFORD ROYAL INFIRMARY.—Dispensary Surgeon, single. Salary £100 per annum, with board and residence.

BURTON-ON TRENT INFIRMARY.—House Surgeon. Salary £150 the first year and £170 the second year, with furnished rooms, coal, and gas free.

BURY INFIRMARY.—Senior and Junior House Surgeon. Salary, Senior £100, Junior £80, with residence and attendances.

CANCER HOSPITAL, Fulham-road, S.W.—House Surgeon. Salary £70 per annum, with board and residence.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Resident Medical Officer, unmarried. Salary £60 per annum. Also Clinical Assistant for three months, on payment of £8 8s.

CHELTENHAM GENERAL HOSPITAL.—Junior House Surgeon, unmarried. Salary £60 per annum, with board, lodging, and washing.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL AND DISPENSARY.—Resident House Surgeon. Salary £110 per year, with board, apartments, and laundress.

COUNTY ASYLUM, Prestwich, Manchester.—Assistant Medical Officer, unmarried. Salary £150 per annum, increasing to £250, with board, apartments, and washing.

COUNTY ASYLUM, Whittingham, Lancashire.—Junior Assistant Medical Officer, unmarried. Salary £150, increasing to £200, and on promotion to £250, with furnished apartments, board, washing, and attendance.

DENTAL HOSPITAL OF LONDON MEDICAL SCHOOL.—Medical Tutor. Salary £40 a year.

DERBY BOROUGH ASYLUM.—Assistant Medical Officer. Salary £120 per annum, with board and washing.

DEVONSHIRE HOSPITAL, Buxton, Derbyshire.—Assistant House surgeon. Salary £50 per annum, with furnished apartments, board, and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Assistant Surgeon.

GENERAL INFIRMARY, Leeds.—Resident Obstetric Officer for six or twelve months. Also House Surgeon for twelve months. Also House Physician for six months. Board, lodging, and washing in each case.

GREAT NORTHERN HOSPITAL, Holloway-road, N.—Casualty Officer for six months with eligibility for re-appointment. Salary at the rate of £52 10s. per annum.

HOLLOWAY AND NORTH ISLINGTON DISPENSARY.—Two Honorary Medical Officers.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Assistant Resident Medical Officer. Salary £180 per annum, with board and residence.

HOSPITAL FOR WOMEN, Soho-square, London, W.—House Physician for six months. Salary £30.

HULL ROYAL INFIRMARY.—Junior Assistant House Surgeon. Salary £60, with board and lodging.

ISLE OF WIGHT COUNTY ASYLUM, near Newport, I.W.—Assistant Medical Officer. Salary £120, rising £10 yearly to £150, with board, lodging, washing, &c.

LIVERPOOL STANLEY HOSPITAL.—Third House Surgeon. Salary £70, with board, residence, &c.

MANCHESTER EAR HOSPITAL, 23, Byrom-street.—Clinical Clerkship for a Senior Student for six months. Honorarium 10 guineas.

METROPOLITAN ASYLUMS BOARD ASYLUM, Leavesden, near Watford, Herts.—Assistant Medical Officer. Salary £150 per annum, rising at the discretion of the Asylums Committee to £170, with rations, lodging, attendance, and washing.

MILLER HOSPITAL AND ROYAL KENT DISPENSARY, Greenwich-road, S.E.—Junior Resident Medical Officer. Salary £80 per annum, with board, attendance, and washing.

NOTTINGHAM GENERAL INFIRMARY.—Senior Resident Surgeon. Salary £200 per annum, increasing by £15 every year. Also two Assistant Resident Surgeons. Salaries £160 per annum each, increasing by £10 every year, furnished apartments, attendance, light, and fuel. Unmarried.

PARISH COUNCIL OF APPLECROSS, Loch Torridon District.—Medical Officer and Vaccinator. Salary £95, free house accommodation and other emoluments.

PARISH OF ST. MATTHEW, Bethnal-green.—Clinical Assistant, unmarried, for the Infirmary at Cambridge-road, N.E., for three months, with possible extension. Salary at the rate of £80 per annum, with board, lodging, and washing.

ROTHERHAM HOSPITAL.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months, with board, lodging, and washing. Salary at the rate of £50 per annum.

ROYAL CORNWALL INFIRMARY.—House Surgeon (unmarried). Salary £100, increasing by £10 a year, with board (excluding stimulants) and apartments.

ROYAL PORTSMOUTH HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with board and residence.

ROYAL SEA BATHING HOSPITAL, Margate.—Assistant Resident Surgeon. Salary £60 per annum, with board and residence.

ROYAL SURREY COUNTY HOSPITAL, Guildford.—Assistant House Surgeon. Salary £50, with board, residence, and laundry.

ST. ANDREW'S HOSPITAL FOR MENTAL DISEASES, Northampton.—Assistant Medical Officer for six months. Salary £3 3s. a week, with board, lodging, and washing.

ST. MARYLEBONE INFIRMARY, Notting-hill, W.—Second Assistant Medical Officer. Salary at the rate of £80 per annum, with board, &c.

ST. PAUL'S HOSPITAL FOR SKIN AND GENITO-URINARY DISEASES, Red Lion-square, W.C.—Clinical Assistant for three months.

SWANSEA GENERAL AND EYE HOSPITAL.—Resident Medical Officer. Salary £75 per annum, with board, apartments, washing, and attendance.

THE CHIEF INSPECTOR OF FACTORIES gives notice of a Vacancy as Certifying Surgeon under the Factory Acts at Parbold, in the County of Lancaster.

WEST-END HOSPITAL FOR DISEASES OF THE NERVOUS SYSTEM, &c., 73, Welbeck-street, London, W.—Medical Registrar. Honorarium 50 guineas per annum.

WEST HAM BOROUGH ASYLUM.—Senior Assistant Medical Officer. Salary £200, rising by £25 annually to £250. Also Junior Assistant Medical Officer, salary £150, rising by £25 annually to £200. Board, furnished apartments, and washing provided.

WESTON-SUPER-MARE HOSPITAL AND DISPENSARY.—Medical Officer to the Provident Dispensary. Salary £100 per annum, with board, lodging, and washing.

WREXHAM INFIRMARY.—House Surgeon. Salary £100 per annum, with board and washing.

Births, Marriages, and Deaths.

BIRTHS.

BRIDGEFORD.—On the 15th March, at Silkote, Boulder City, West Australia, the wife of Walter Bridgeford, M.R.C.S. Eng. and L.R.C.P. Edin., of a son.

GABRIEL.—On April 27th, at Pembridge-villas, W., the wife of William Maurice Gabriel, M.R.C.S., L.D.S. Eng., of twin daughters.

LYS.—On April 25th, at Southbrook, Bournemouth, the wife of Henry Grabham Lys, M.D., of a daughter.

SYKES.—On April 21st, at York-road, Birkdale, Southport, the wife of J. Herbert Sykes, L.R.C.P. Lond., M.R.C.S., of a son.

THWAITES.—On April 22nd, at 94, Beaconsfield-road, Brighton, the wife of Gilbert B. Thwaites, M.B. Lond., of a son.

MARRIAGES.

ELLIOTT—WEAVER.—On April 29th, at St. Alban's, Tattenhall, by the Rev. L. M. Farrall, Rector of Holy Trinity, Chester, John Elliott, M.D., Chester, to Margaret, youngest daughter of the late William Weaver, of Stanney. No cards.

KENNY—MASON.—On April 30th, at All Saints' Church, Silkstone, by the Rev. R. L. Bellamy, B.D., John Drought Kenny, M.D., M.Ch. R.U.I., of Treeton House, Rotherham, fourth son of the late Henry Kenny, of Ballylina, co. Tipperary, to Gertrude Mary, only daughter of the late Joseph Mason and Mrs. Stone, Jordan Villa, Barnsley.

NEIL—CRAVIE.—On the 27th of April at All Saints' Church, Leamington, by the Rev. John Hendry Anderson, Rector of Tooting Graveney, James Neil, M.D., Superintendent of the Warneford Asylum, Oxford, to Kate, widow of the late John M. Cravie, M.A. Aberdeen, and recently Warden of Queen Margaret Hall, University of Glasgow.

RANSOME—GIFFORD.—On April 24th, at the Parish Church, Llangollen, Arthur Cyril Ransome, M.A., M.B. Cantab., M.R.C.S., of Oxton, Birkenhead, to Helena Eliza, youngest daughter of the late Robert Gifford of Buenos Ayres.

TULK-HART—BIGLAND.—On April 29th, at Staveley, Ulverston, by Rev. Edwin Heath, assisted by Rev. Vincent Kirby, Thomas John Augustus Tulk-Hart, M.D., son of E. J. Tulk-Hart, Esq., M.D., of Brighton, to Blanche Madeline Bigland, daughter of Thomas Bigland, Esq., M.R.C.S., granddaughter of the late John Bigland, Esq., of Bigland Hall, Ulverston.

DEATHS.

CAVAFY.—On April 28th, at Clarges-street, W., suddenly, John Cavafy M.D., F.R.C.P., of Fourth-avenue, Hove.

COTTAM.—On April 19th, at Southampton, Francis H. Warburton Cottam, M.R.C.S., L.R.C.P., eldest son of the late Rev. Henry Cottam, M.A., rector of St. Mary's, Crumpsall, aged 38 years.

CUMMING.—On April 28th, at Exmouth, Devon, Arthur J. Cumming, F.R.C.S., aged 83.

EDWARDS.—On April 25th, Vertue Edwards, M.R.C.S., of Shottisham, Suffolk, in his 82nd year.

GRISTOCK.—On April 23rd, at Abbotsbury, London-road, Croydon, William Gristock, M.D., aged 47.

WATSON.—On April 26th, at 2, Portland-place, Torquay, Arthur Edmondstone Watson, M.R.C.S. Eng., L.R.C.P. Lond., aged 34, only son of the late John Watson of Paris and of Mrs. Watson of Pepys-road, Wimbledon.

WHITING.—On April 23rd, at his residence, Carson-road, West Dulwich, Surrey, James D. C. Whiting, M.R.C.S.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

CAN A MEDICAL MAN RETIRE FROM A CASE AND CHARGE FOR HIS SERVICES?

AT the Southwark County Court on Tuesday before his Honour, Judge Addison, K.C., Mr. Alfred Matcham of Gladstone-street, S.E., sued Mr. William Lacey of Kennington Park-gardens, to recover £1 10s. 6d. for professional services rendered. The plaintiff's case was that he attended the defendant's wife and subsequently his child, the latter being ill with bronchitis. The wife was very inexperienced in the care of sick children and she so persistently did what he advised her not to do and refused to do what he requested her to do in regard to the child that after several visits he wrote declining to attend any more and suggesting that another medical man should be called in. His bill for attendance on the wife was 15s. 6d. and that for the child until he gave up the case 15s. The defendant declared that only once did his wife rub the child with a liniment which the medical man did not approve of, but when told not to use it she at once desisted. In everything she carried out the instructions to the letter. As the result of the medical attendant's throwing up the case the child, who was suffering from bronchial pneumonia, was without medicine for a whole day and it was not until late at night that the services of another practitioner were secured.—His Honour (to the plaintiff): You cannot recover for attendance on the child. You cannot tell people that you will not attend any more and that they had better call in another doctor and then charge for your own attendances. The obligation of a doctor is to attend through an illness as well as he can.—The plaintiff: But the mother persistently refused to follow my advice.—His Honour: You must expect mothers sometimes when they get anxious about their children to rub them with oil or to do things of that kind, but that is not sufficient reason for a doctor to say he will not go on with the case.—The plaintiff: But has a doctor no power to retire from a case?—His Honour: Yes; but he cannot charge for it. When you are called into a case your obligation is to do your best until you are discharged.—The plaintiff: But am I not able to charge for services actually rendered?—His Honour: No; they are thrown away where a person has to call in another doctor because you retire on such weak grounds as in this case.—The plaintiff: There was such a desire on the part of the mother to go the reverse way to that I wanted her to go and the responsibility rested on me.—His Honour: You are entitled to say you decline the responsibility, and that you will not attend any more, but you cannot charge for your services. There are so many troublesome parents in this world that if a doctor could throw up his case and then charge for it I do not know where we should be. My prejudice is in favour of professional men, but a doctor cannot throw up a case because he feels that his professional feelings are hurt and then charge for it. Your engagement was to attend the child during its illness—that is the ordinary engagement in such a case—and if you throw it up you do it at your own risk. You can only recover for attendance on the wife. Therefore, there is judgment for you for 15s. 6d.—Judgment was entered accordingly.

*** We do not express any opinion upon this particular case; but it is evident that it would be very unfair if it were to be held a legal principle in all circumstances that a medical man, having once taken charge of a case, can never retire from that charge without sacrificing all fees earned up to the date of his withdrawal.—ED. L.

THE FACTORY GIRLS' COUNTRY HOLIDAY FUND.

WE are requested by Miss M. A. Wyatt, the honorary treasurer of this fund, to acknowledge in our columns a donation of £1 from "A Medical Student."

PREVENTION OF BEDSORES—AIR *VERSUS* WATER.

To the Editors of THE LANCET.

SIRS,—Will you or any of your readers kindly inform me of the relative advantages of the use of air- and water-cushions in preventing bed-sores? I am accustomed to use water, but it is heavy and unpleasant in event of leakage. I am, Sirs, yours faithfully,

April 25th, 1901. W. H. B.

FAIR RIVALRY?

To the Editors of THE LANCET.

SIRS,—May I trouble you to advise me, in your next issue, what action I might take, if any, in the following circumstances? Some 10 months ago a practitioner, whom I will call A, came to the village where I practise and took over the practice previously held by another medical man whom I will call B. About 15 months before B left he engaged an assistant who occupied rooms for one year in a cottage in the main thoroughfare between a new estate and the village and station. During the residence of the assistant both B's name and that of the assistant were on a plate at the gate of this cottage. When the assistant left, three months before B, the plate still remained, though B never went near the place. As I had a well-founded belief that B was soon about to leave the village I took on notice of the plate having been allowed to remain on. But when A came in and put his plate on the same cottage gate solely for the purpose of advertising (as he never went to the cottage, which is about 300 yards from where he lives) I thought it was unprofessional conduct. I have made no remark until now, when the cottage changed hands and the present occupier, quite a stranger in the place, refused to have A's plate on the gate. A then put his plate on the gate of another cottage directly facing the main exit from the above-mentioned estate, solely for the purpose of advertising, as I have had some inquiries made and find that he has no rooms in the cottage nor does he dispense there or leave any drugs or medicines there. I think this conduct is advertising, wrong in a professional sense, and very unfair to me. But A has busied himself to do me harm in more ways than one. Amongst others he has called upon a number of my patients, leaving his cards on them, on the ground that he had no formal introduction to the practice from A and did not know who A's patients were. Will you kindly advise me as to whether I can put a stop to this advertising or not, and if so what are the steps to be taken? Thanking you in anticipation, Yours truly,

April 28th, 1901. MULLACH ADOO.

*** The only course is to give information to the General Medical Council and to be prepared to support the information. We do not approve of A's use of a door-plate upon a cottage which he does not occupy or use in his practice.—ED. L.

ANISOMETROPIA.

To the Editors of THE LANCET.

SIRS,—Would you kindly oblige me with the name and publisher of some book containing examples of prescriptions for anisometropia, &c., and similar defects of vision, by means of glasses? Do you know if Morton's book, "Refraction of the Eye: its Diagnosis and the Correction of its Errors," gives such? In standard works such as Fuchs's, Swanzy's &c., no examples of such troubles are given. An American book would suit. I am, Sirs, yours faithfully,

April 23rd, 1901. A. B. A.

*** The Refraction of the Eye, by Edward Davis, M.D.; Macmillan, 1900. James Thorington, M.D., Refraction and How to Refract Rebman, London, 1900. George F. Helm, M.D., Short Sight, Long Sight, and Astigmatism; Churchill, London, 1886. The successive numbers of the *Optician* (Gütenburg Press, London), published weekly for several years past, contain in answer to correspondents many very intelligently worked-out replies to questions on refraction.—ED. L.

DOUBTFUL ADVERTISEMENT.

THE following advertisements appear in the *Boston Independent* and *Lincolnshire Advertiser* of Saturday last, April 27th:—

CHANGE OF ADDRESS.

DR. ——— has Removed from 118a, High-street, to SOUTH-STREET, BOSTON.

MISS BELL, Experienced Laundress, has removed from No. 22, Liquorpond-street, to 43, LIQUORPOND-STREET, Boston.

We do not recommend our readers to imitate the examples set of advertising in the press their changes of address. Such advertisements by medical men occasionally come under our notice, and we do not doubt that in the majority of cases there is no intention of infringing medical etiquette; but they open the door to abuse, for no rule can be laid down to decide how long such advertisements should appear. The fact that a man has changed his address should be made known to his own patients and to nobody else outside the circle of his private friends and his tradesmen.

A. B.—An agreement ought to have been made before the rather complex arrangement for working the practice was started. As B has now to pay for a share in a practice of which he has had the sole management for three years, we think that the price which he pays should be regulated to a certain extent by the influence that he has had upon the receipts. But if the value of the practice through his sole exertions has considerably appreciated during the three years it is hard that he should have to pay a considerably increased sum to enjoy further benefits. His partner, who for three years has been a sleeping partner, will in these circumstances derive benefit from B's unaided exertions, and should, we think, be ready to make lenient terms with B. Owing to the absence of an agreement the matter is one upon which no definite opinion can be given, but from our correspondent's account we feel that it would be best for the two partners to select an arbitrator trusted by both of them and to abide by his decision. It would be a pity if they did not start on their joint venture amicably.

Compensation.—"Where a workman has given notice of an accident he shall, if so required by the employer, submit himself for examination by a duly qualified medical practitioner *provided and paid by the employer*, and if he refuses to submit himself to such examination or in any way obstructs the same his right to compensation, and any proceeding under this Act in relation to compensation, shall be suspended until such examination takes place." It will be observed that the medical practitioner is to be "provided and paid" by the employer, but as there may be a dispute as to payment if such an examination

is made without direct authority from the employer and before payment the medical man who makes an examination should see that there is no doubt that he is "provided" by the employer and that the employer understands his liability towards him.

Eclectic.—We have no information on the matter.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 2nd, 1901.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. in Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
April 26	29·90	E.	...	107	59	47	45	53	Fine
,, 27	29·85	N.E.	...	102	52	42	41	46	Cloudy
,, 28	29·89	S.E.	...	93	57	40	42	48	Cloudy
,, 29	29·88	S.	...	94	60	39	44	47	Foggy
,, 30	29·95	ENE	...	96	65	46	46	53	Cloudy
May 1	30·09	E.	...	100	65	44	47	52	Fine
,, 2	30·17	N.E.	...	61	53	48	48	50	Overcast

Medical Diary for the ensuing Week.

OPERATIONS

METROPOLITAN HOSPITALS.

MONDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M.).

TUESDAY (7th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

WEDNESDAY (8th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), Cancer (2 P.M.).

THURSDAY (9th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (2 P.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

FRIDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (2 P.M. and 6 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.).

SATURDAY (11th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), London Throat (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (7th).—PATHOLOGICAL SOCIETY OF LONDON (Laboratory Meeting, Guy's Hospital).—8 P.M. Mr. W. C. C. Pakes: (1) The Collection of Gases produced by Bacteria; (2) The Effects of Nitrates upon the Morphology of Certain Bacteria.—Mr. Beaton, Mr. Caiger, and Mr. Pakes: The Value of Neisser's Stain in the Diagnosis of Diphtheria.—Mr. Butler and Mr. French: Nitrogenous Metabolism in Bright's Disease.—Dr. Beddard: A Method of Demonstrating Bacteria in Teeth.—Mr. J. W. Eyre: The Differential Diagnosis of Strains of Pneumococci.—Mr. Eastes: Coliform Organisms obtained from Beer.—Dr. Bryant: Bacteria in Ante-mortem Thrombi.—Prof. V. Harley and Dr. Barratt: Experimental Cirrhosis of the Liver.

THURSDAY (9th).—BRITISH GYNÆCOLOGICAL SOCIETY (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Elder. Continuation of the Discussion on Retroversion of the Uterus. Paper:—Dr. W. Alexander: Posterior Vaginal Cœliotomy in Operation for Pelvic Disease.

NEUROLOGICAL SOCIETY OF LONDON (11, Chandos-street, Cavendish-square, W.).—Communications: Dr. J. Turner: A New Method of Staining Nervous Tissues with Methylene Blue.—Dr. M. Clarke: (1) A Case of Pachymeningitis of the Spinal Cord; (2) Changes in the Spinal Cord in a Case of Pernicious Anæmia; (3) Tumour of the Optic Thalamus.—Dr. Batten: Three Cases of Infantile Paralysis.—Dr. W. Barratt: Changes in the Nervous System in a Case of Old-standing Amputation.

FRIDAY (10th).—BRITISH LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL ASSOCIATION (11, Chandos-street, Cavendish-square, W.).—4 P.M. Cases and Specimens will be shown by the President, Mr. Lennox Browne, Dr. W. Wingrave, Dr. Abercrombie, and others.

CLINICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8.30 P.M. Papers:—Dr. Pasteur and Dr. Price-Jones: A Case of Cancer of the Stomach with Unusual Vascular and Blood Conditions.—Dr. N. Dalton: A Case of Perforating Gastric Ulcer causing a Subdiaphragmatic Abscess which burst through the Diaphragm into the Lung.—Mr. Bidwell: Some Cases illustrating the Value of Laparotomy in Ascites.—Dr. Risien Russell and Mr. R. Johnson: Traumatic Subdural Hæmorrhage on the Sixth Day after the Injury and Successfully Treated by Operation.

SATURDAY (11th).—OTOLOGICAL SOCIETY OF THE UNITED KINGDOM (Hall of the Royal College of Physicians, Queen-street, Edinburgh).—11 A.M. Ordinary Meeting. Discussion on the Opening and Draining of Cerebral and Cerebellar Abscesses arising from Middle Ear Suppuration (opened by Mr. C. A. Ballance).

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (6th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. T. Colcott Fox: Consultation. (Skin.)

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Beddard: Artificial Aids to Digestion.

TUESDAY (7th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. C. O. Hawthorne: Consultation. (Medical.)

ROYAL INSTITUTION OF GREAT BRITAIN.—3 P.M. Dr. A. Macfadyen: Cellular Physiology, with Special Reference to the Enzymes and Ferments.

WEDNESDAY (8th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. P. J. Freyer: Consultation. (Surgical.)

THURSDAY (9th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Consultation. (Surgical.)

CHARING-CROSS HOSPITAL.—4 P.M. Dr. J. Mitchell Bruce: Cases in the Wards. (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. H. S. Collier: Demonstration of Selected Cases.

WEST LONDON POST-GRADUATE COURSE (West London Hospital, W.).—5 P.M. Dr. Beddard: Rectal Feeding.

FRIDAY (10th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. M. Gunn: Consultation. (Eye.)

ROYAL INSTITUTION OF GREAT BRITAIN.—9 P.M. Prof. Jagadis Chunder Bose: The Response of Inorganic Matter to Mechanical and Electrical Stimulus.

EDITORIAL NOTICES.

It is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

During the week marked copies of the following newspapers have been received:—*Swindon Advertiser, Yarmouth Mercury, Keighley News, Scotsman, Leeds Mercury, Exeter Times, Grantham Journal, Times of India, Pioneer Mail, Architect, Citizen, Liverpool Daily Post, Sanitary Record, Fife News, Bristol Mercury, Huddersfield Examiner, Stamford Guardian, Yorkshire Post, Builder, Otago Daily Times, Sheffield Daily Telegraph, Dundee Advertiser, Birmingham Gazette, Cardiff Express, South Wales News, Glasgow Mail, Truth, Newcastle Leader, Bradford Argus, Carlisle Journal, Sussex News, Sunderland Echo, Northampton Reporter, Boston Independent, Reading Mercury, Australasian Medical Gazette, City Press, Hertfordshire Mercury, Local Government Chronicle, Islington Gazette, Christian Globe, Ceylon Standard, Sydney Mail, Commercial Intelligence, Mining Journal, Surrey Advertiser, Grimsby Daily Mail, Local Government Journal, Luton News, Consett Guardian, Yeovil Chronicle, Church Family Newspaper, Forfar Herald, Weekly Free Press and Aberdeen Journal, Blackpool Times, Tewkesbury Record, Invention, Westminster Budget, Literature, Thirsk News, Gloucester Chronicle, North Suffolk Advertiser, Stafford Advertiser, Cornish Guardian, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. J. R. Armstrong, Treorchy; Mr. H. S Ashburner, Manchester; Association for Vaccine Lymph, Lond.; Abbey Effervescent Salt Co., Lond.; Messrs. Alford and McCulloch, Lond.

B.—Dr. G. Bellei, Bologna; Messrs. W. H. Bailey and Son, Lond.; Dr. R. H. Bakewell, Auckland; Bishopstone House, Bedford, Proprietor of; Messrs. J. and H. Bell, Nottingham; Mons. Berson, Lond.; Messrs. Buchner, Schacht and Co., Lond.; Borough of Invercargill, New Zealand, Chief Health Inspector of; Messrs. F. C. Benger and Co., Manchester; Bury Infirmary, Hon. Secretary of; Mr. Stanmore Bishop, Manchester; Mr. W. H. Brown, Leeds; Colonel Brooke, Athlone; Dr. T. B. Broadway, St. Austell; Mr. G. M. Bell, Lond.; Mr. A. E. Barker, Lond.

C.—Dr. O. J. Curris, Maritzburg; Cortland Wagon Co., Lond.; Messrs. Cassell and Co., Lond.; Mr. W. H. Chapman, Whitehaven; Cheltenham General Hospital, Secretary of; Chesterfield, &c., Hospital, Secretary of Dr. W. H. Cooke, Bath; Cyclists' Touring Club, Lond., Secretary of; Cafolin Co., Lond.; Clayton House, Lond., Proprietor of; Mr. W. H. Collingridge, Lond.; Messrs. J. and A. Churchill, Lond.; Cumberland Infirmary, Carlisle Secretary of; *Charlotte Medical Journal*, U.S.A., Editor of; Mr. J. Black Cameron, Lond.; Mr. E. P. Court Hambledon; Mr. D. A. Campbell, Halifax, Nova Scotia; County Asylum, Newport, Isle of Wight, U. P.

D.—Mr. J. Donald, Dumfries; Messrs. Darton, Globs, and Co., Oldham; Devonshire Hospital, Buxton, Secretary of; Paul B. Derrick Advertising Agency, Lond.; Dr. M. Dockrell, Lond.; Mr. W. Downing, Haverfordwest; Discount Motor Car Co., Lond.; Mr. W. Durrant, Lond. Dr. T. S. Dowse, Lond.; Derby Borough Asylum, Clerk of; De Dion Bouton, Ltd., Lond.; Dr. A. H. Davisson, Philadelphia.

E.—Mr. S. J. D. Esser, Zeist, Netherlands; *Engineer*, Lond., Publisher of.

F.—Dr. Kenneth Fraser, Wigan; Mr. A. G. R. Foulerton, Lond., Food and Cookery Exhibition, Lond., Hon. Director of; Mr. N. H. Forbes, Tunbridge Wells.

G.—Mr. H. J. Glaisher, Lond.; Messrs. J. Griffin and Co., Lond.; Dr. J. Galloway, Lond.; Mr. J. Gray, Edinburgh; Professor A. De Giacomo, Naples; G. A. G.; Mr. H. Garland, West Kirby; Surgeon-Major W. C. Gorgas, Havana.

H.—Mr. H. Holmes, Pontefract; Dr. Edgar Huntley, Lewisham; Messrs. J. Haddon and Co., Lond.; Dr. J. Hay, Liverpool; Hovis Bread Flour Co., Macclesfield; Humphreys, Ltd., Lond.; Captain C. R. Harris, R.N., Hove; Dr. J. W. Hunt, Bicester; Messrs. Hoppe and Robinson, San Francisco; Holloway and North Islington Dispensary, Secretary of; Miss Hargreaves, Lond.

I.—Messrs. Idris and Co., Lond.

J.—Dr. Robert Jones, Woodford.

K.—Mr. A. M. Kellar, Lond.; Mr. W. M. Khan, Peshawar; Kaiser Frederich Quelle Actien Gesellschaft, Offenbach; Kelpion Co., Lond.

L.—Mons. H. Le Soudier, Paris; Dr. J. H. Lamb, Crewkerne; Liverpool Stanley Hospital, Secretary of; Leeds General Infirmary, Manager of; Dr. D. Lawson, Banchory; Mr. H. K. Lewis, Lond.; Lea's Advertising Agency, Lond.; Messrs. Lea Bros., Philadelphia.

M.—Dr. D. M. Mackay, Grimsby; Dr. Dysart McCaw, Lond. Mr. E. Merck, Lond.; Manchester Ear Hospital, Secretary of; Mr. B. G. A. Moynihan Leeds; Dr. J. A. Mactougall, Cannes; Herr L. Marcus, Berlin; Mr. A. L. McMurtry, La Trinidad, Mexico; Mr. C. A. Morton, Clifton; Mr. J. C. McWalter, Dublin; Dr. C. Muther, Isle of Wight; Miss D. MacArthur, Llandilo; Mr. C. P. Mathew, Exeter; Dr. J. MacNidder, Hull.

N.—Mr. J. O. Neumann, Lond.; Dr. W. R. Nicol, Llandudno; Mr. Nourse, Lond.; Mr. F. C. Needes, Lond.; Mr. H. Needes, Lond.

O.—Mr. W. S. Ogle, Lond.

P.—Mr. Y. J. Pentland, Edinburgh; Mr. J. Palmer, Snodland; Plumbers, Worshipful Company of, Lond.; Porcherine, Ltd., Lond.

R.—Mr. H. B. Robinson, Lond.; Mr. H. T. Roaby, Lond.; Messrs. Runton and Barry, Hull; Dr. M. W. Renton, Crowle; Royal Albert Hospital, Devonport, Secretary of, Mr. S. Renaud, Edenbridge.

S.—Mr. F. A. Simpson, Dudley; Dr. D. F. Shearer, Lond.; Mr. W. B. Sparrow, Burton-on-Trent; Messrs. Street and Co., Lond.; Mr. A. Snowdon, Hutton-Rudby; Swansea Hospital, Secretary of; Mr. E. Schlesser, Nice; St. Marylebone Infirmary, Medical Superintendent of, South Australian Government Bonded Depôt, Lond.; Scholastic, Clerical, &c., Association, Lond.

T.—Dr. F. Tresilian, Enfield; Dr. J. H. Thornton, Hove, T. J. C.; Tallerman Institute, Lond.; Temperance Male and Female Nurses' Coöperation, Lond.; Mr. Pugin Thornton, Canterbury.

U.—University of Durham College of Medicine, Newcastle, Secretary of.

V.—Mr. J. W. Vickers, Lond.

W.—Dr. J. R. Woodcock, Ripon; Messrs. Wagstaff, Hornchurch; W. G. M.; Messrs. Whitbread and Co., Lond.; Surgeon-Colonel F. H. Welch, Lond.; Messrs. F. Williams and Co., Lond.; Mr. S. T. Q. Wood, Lond.; Messrs. W. Wood and Co., New York; Dr. F. J. Waldo, Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. G. N. Adams, Kenfig Hill; Dr. J. M. Atkinson, Wimbledon; American Medicine Publishing Co., Philadelphia; Messrs. Allen and Hanburys, Lond.; Mr. H. Appleton, The Lizard; A. W. S.; A. V. W.

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